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# THE PRUSSIAN ELEMENTARY SCHOOLS

BY

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PROFESSOR OF ELEMENTARY EDUCATION  
GEORGE PEABODY COLLEGE FOR TEACHERS

New York

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## PREFACE

THE following study of the Prussian elementary schools was made during the year and a half preceding the outbreak of the Great War. In setting forth the facts there has been little attempt to draw any conclusions. We believe, however, that a careful study of the Prussian school system will convince any unbiased reader that the Prussian citizen cannot be free to do and act for himself; that the Prussian is to a large measure enslaved through the medium of his school; that his learning, instead of making him his own master, forges the chain by which he is held in servitude; that the whole scheme of Prussian elementary education is shaped with the express purpose of making ninety-five out of every hundred citizens subservient to the ruling house and to the state.

The elementary schools of Prussia have been fashioned so as to make spiritual and intellectual slaves of the lower classes. The schools have been used almost exclusively to establish more firmly the Hohenzollern upon his throne. The present Emperor wrote in 1889: "We have thought for a long time of making use of the schools in combating the spread of socialistic and communistic ideas. . . . The schools must create in the youth the conviction that the doctrines of socialism are contrary not only to God's decrees and Christian moral teaching, but in reality incapable of application and destructive both to the individual and the state. The schools . . . must impress on the youth how Prussian kings have continually taken pains to better the conditions of the working class from the time of the legal reforms of Frederick the Great down until to-day." <sup>1</sup>

<sup>1</sup> See page 398 ff.; also page 30 ff.

The Prussian elementary school is the best in the world from the point of view of the upper classes of Germany. From the point of view of the lower classes it is the worst system, for it takes from them all hope of improving their condition in life. The Prussian method of education has produced a people that moves as one man at the command of its king. The result is exactly the same as if one would take an infant and teach him only one word to be used in response to all situations — in Germany this word is "Fatherland."

There are many excellent features of the Prussian school system; there are many things which we would do well to study carefully. The Prussian king's conception of education for the lower classes, however, is directly opposed to everything American.

We wish to acknowledge our indebtedness in the preparation of this study to the following workers in the field of education: Dean James E. Russell, Teachers College; Dr. Frederick E. Farrington, Headmaster, Chevy Chase School, Washington, D.C., and formerly Professor of Comparative Education, Teachers College; Dr. Paul Monroe, Teachers College; Mr. John C. Mills, Kirksville, Mo.; Mr. Bolton Smith, Memphis, Tennessee; Miss Lula O. Andrews, Professor of English, George Peabody College for Teachers, Nashville, Tennessee; and to a great number of German teachers who gave much of their time and energy.

THE AUTHOR.



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# THE PRUSSIAN ELEMENTARY SCHOOLS



# PRUSSIAN ELEMENTARY SCHOOLS

## CHAPTER I

### DEVELOPMENT OF THE PRUSSIAN *VOLKSSCHULE*

DURING the twelfth and thirteenth centuries there were a number of church schools in Germany, which were calculated to meet the needs of the upper classes of society and the Middle Ages needs of the church. At a somewhat later time, in the fourteenth and fifteenth centuries, there grew up in the cities of Germany a large number of Latin schools and German schools, schools in which German was used, known as *Schreibschulen*, *Rechenschulen*, or *Winkelschulen*. These schools of the latter type were called into existence by a need felt by the rich citizens of the larger medieval cities for the instruction of their children along somewhat more practical lines than the mere study of Latin. The writing-schools and arithmetic-schools were the beginnings of the later citizen-schools (*Bürgerschulen*) and we can see therein the origin of the *Volksschule* of to-day. But in the lands of the Brandenburgers a *Volksschule*, in the present-day sense of the word, scarcely existed at that time even in the larger cities, and most certainly not in the country.

The Reformation brought a change in Brandenburg as well as in other parts of Germany. The leaders of the reform movement wanted every Protestant child to receive some training in the catechism, reading, and singing, and consequently schools had to be established for this purpose. In the larger villages the pastor was to give this instruction, but in the smaller places the sexton or sacristan was the teacher, and hence the name sacristan-schools. And just

The  
Küster-  
schule or  
Sacristan-  
school

here the church got its firm hold upon the elementary schools, for the sacristans or, indeed, the pastors became the future elementary school-teachers. The sextons or the pastors received no salaries except that they might receive some articles of food or fuel from the parents of their pupils. At that time there were no special schoolhouses and the living-room of the teacher served as a classroom. These sextons were generally uneducated hand-workers, with no professional training at all, the chief requirements being piety and orthodoxy. Teaching consisted chiefly in giving out passages of Scripture to be memorized, and later hearing the recital of these passages.

In various provinces and principalities which to-day form a part of Prussia, there were school regulations dealing with *Volksschulen*, issued during the sixteenth and seventeenth centuries. That of Pomerania was issued in 1563. Duke Johann Georg had one drawn up for Brandenburg in 1573; the Great Elector issued the school regulation for Cleve in 1662; and still another was published for the same principality in 1687. Not much, however, was accomplished for the *Volksschulen* in Prussia in a practical way until the accession of Frederick William I, in 1713. Previous to his time the progress of theory had far out-run practice, and though many school laws were already in existence, very few, if any, were in successful operation. The schools were very poor, and the teachers, without much preparation of any kind, even worse. A very interesting report<sup>1</sup> of the examination of candidates for a teaching position makes very clear what kind of instruction the children received in the German schools even as late as 1729, the date of this report.

Five applicants reported for a vacant position, with whom a singing examination was undertaken in the church before the whole community.

1. Martin Ott, shoemaker, thirty years old, sang in the church:  
(a) *Christ lag in Todesbanden*; (b) *Jesus, mein Zuversicht*; (c) *Sieh hier*

<sup>1</sup> Paulig, *Friedrich I, König von Preussen*, p. 278 ff.

*bin ich, Ehrenkönig.* Has much melody to learn; his voice could be better. He read Genesis 10: 26; spelled verses 26-29. The reading was that of a beginner. In spelling he made several mistakes. He read three kinds of handwriting, fairly well. He answered three questions based on general intelligence. He wrote three lines of dictation, — four mistakes. He did not know anything at all about arithmetic.

2. Jacob Machl, weaver, who has passed fifty years on earth, sang: (a) *O Mensch, beweine;* (b) *Zieh' ein zu deinen Thoren;* (c) *Wer nur den lieben Gott lässt walten.* Melody went over into many other tunes; voice should be stronger; squeaked several times. He read Joshua 19: 1-7, making ten errors; spelled Joshua 18: 23-26, without an error; read three different handwritings with hesitation; answered questions from general knowledge, in which he gave satisfaction. He wrote three lines of dictation, making five errors. He knew nothing of arithmetic.

3. Phillip Hopp, tailor, already an old, little, infirm man of sixty. He sang (a) *Ein Lämmlein geht;* (b) *Mitten wir im Leben.* He, possessing voice like a bawling calf, also fell into the wrong tune. He read Joshua 19: 7-12 poorly, and spelled very miserably; failed on all three questions on general knowledge; attempted to read three different handwritings and failed; wrote only three words of the dictation, which he could not read himself, so we refrain from speaking of it. Arithmetic was unknown to him, — he counted on his fingers.

4. Johann Schütt, tinker, has wandered fifty years on this earth, sang the following: (a) *O Ewigkeit, das Donnerwort;* (b) *Eine ist not;* (c) *Liebster Jesu, wir sind hier,* with considerable applause. Spelled Genesis 10: 13-18, not at all badly. In the catechism one noticed that he was not in good practice in some parts; wrote three lines of dictation, making ten mistakes. He understood only addition in arithmetic.

5. Frederick Loth, under officer, forty-five years of age, made a campaign in regiment against Sweden and thereby lost a leg. He sang the following: (a) *Christ lag in Todesbanden;* (b) *Allein Gott in der Höh';* possessed strong voice without melody; read slowly three handwritings. He knew the catechism and did fairly well on four questions on general knowledge. In three lines of dictation he made eight errors. He knew addition and a little subtraction.

It was unanimously felt that Jacob Maehl was the most capable in comparison with the others, especially with the tinker, who was not to be trusted, since he tramped about the country a great deal, or with the officer, because he might be suspected of using his sword too severely upon the

poor youngsters, which might cause grievous pain to the sympathizing mothers, and besides, there is a difference to be made between rough soldiers and such little worms (children). The pastor had a vote taken, and Maehl was unanimously elected. After the vote had been taken the decision, together with the necessary warning as to conduct, was announced to the successful candidate and he was also informed that he should come immediately. Hereupon, these minutes were drawn up and signed with the blessing of the pastor and with mutual satisfaction both on his part and on the part of the community.

After Melanchthon's death the Lutheran church and doctrines became more and more dogmatic, even more so than the Roman church had been before the Reformation.

**Pietism :**  
**Spener and**  
**Francke**

This period of dogmatism continued until the end of the seventeenth century, when there arose a new reformation within the ranks of the Lutherans. This new movement was known as *pietism*. It was a demand for the expression of piety and devotion in individual action. Human conduct was to be guided by inner reverence, devotion, and a conception of religion. The leaders of the new tendency in religious life held that the evils of the day were due to the poor and insufficient training which the children received, in that they did not know or understand the things they learned in school. The pietists insisted on an intelligent comprehension of the subject-matter of religious teaching rather than a mere memorization. As they believed in religious affairs that doctrine and practice should be united, so also they held that the thing and the object should be connected in the schools. Inasmuch as the pietists believed in the total depravity of man, it devolved upon them to provide education as a discipline for the conduct of life. And this they did, providing schools especially for the poor, who were very much neglected during this century. The pietistic movement, though primarily religious, had a great influence upon elementary schools during the first part of the eighteenth century, due to the fact that up to this time all elementary edu-



cation was predominantly instruction in religion. The aim of the school, according to the theory and practice of the pietists, was a living knowledge of God, which would produce good citizenship.

Jacob Spener is generally regarded as the founder of the pietistic movement. His work, however, was more directly connected with the church than with the school. To Spener was due the general practice of confirming children at the end of the fourteenth year. It is true that the confirmation service had existed before this time, but under Spener's influence confirmation came to be looked upon as the closing point of the education of all children who did not intend to go to higher schools. It came in time to mark the end of the compulsory education period, and so until to-day confirmation and leaving the *Volksschule* are synchronous. Religious instruction was also benefited in that a definite aim, confirmation, was set for it. Spener's method of teaching the catechism was different from that which had preceded. Hitherto, catechism and other religious work had been merely a matter of memory, — learning of words. Spener insisted on an understanding knowledge of all that was learned, and to accomplish his end he developed a system of questions and answers, which was an improvement over the old method. This new catechetical method had also an influence on the methods employed in teaching the other subjects.

Still greater in his influence upon the *Volksschulen* was August Hermann Francke, born in 1663. He became a professor at the University of Halle in 1691, and at the same time became pastor of the church at Glaucha. The "ragged <sup>Francke</sup> school" or orphanage at Halle, which Francke founded, together with a number of other types of schools, exerted a great influence over the development of the German *Volksschule*. During the century following a large number of orphanages were founded,

modeled after the one at Halle. The chief aim of such schools was the development of Christian character. Religion, as hitherto, held the chief place in the curriculum. Francke, however, held that other subjects were equally necessary for the poor youths; and consequently, reading, writing, arithmetic, elementary science, geography, history, government, and hand-work were each given a place in the curriculum.<sup>1</sup>

The instruction in religion in the typical school founded by Francke consisted of the catechism, and passages from the Bible, and reading of the Bible. Catechism work was the most important. The method, briefly, was the recitation of the Lutheran catechism, and explanation of it, and then application of its principles to the daily life of the children. Almost one half of the time was devoted to religion, and in some schools very nearly all of the time was given to this subject. However, in the school at Halle an equal number of hours was devoted to reading, writing, arithmetic, and singing as was given to religion. The method in reading was as follows: The teacher began by writing the letters on the board, pronouncing the name of each letter, and having the children repeat them, and later pick out the same letters in their books. The next step was syllabication and spelling. After the children had practiced reading the syllables in their primers, they used their catechism books for further exercise of this nature. The Bible was used as a reader, for there was no special reading book. Writing was also considered to be very important, but the method was peculiar. The teacher made copies for the children who were just beginning, and the children would simply write over the letters made by the teacher. In 1705 printed copies were furnished by the teacher. Guide lines were also used in order to teach the children to write straight. Arithmetic

<sup>1</sup> Schmid, *Geschichte der Pädagogik*, III, Schulordnungen der Francke'schen Stiftungen.

was begun after the children could read. The four fundamental processes, numeration, and the rule of three was the course, though sometimes fractions were taught. Later, however, denominate numbers, *i.e.* marks, hundredweight, etc., etc., were taught in order to show the value of arithmetic. Examples were solved on the board, at least one example a day. The pupil would solve, describing the processes as he went to the listening class. This method is still the most common one as far as board work is concerned in the schools which we have visited. Music had also quite a place in the schools for it was closely connected with singing in the church. Musical notation was taught the boys, while the girls learned only rote singing. The other subjects mentioned in the *Schulordnung* were barely touched. The theory and practice in Francke's school, as in others, were not always on speaking terms.<sup>1</sup>

Perhaps the greatest service of Francke to the German school system was the foundation of the *Seminarium præceptorum*, the normal training school, where not only elementary school-teachers were prepared, but also where students entering other fields could obtain pedagogical training. This *Seminarium* at Halle became the model for institutions for training of elementary teachers throughout all Germany.

Another service of the work of Francke at Halle consisted in the issuance of a school regulation, which was copied in many states and principalities of Germany. Though all differed somewhat from the original regulation at Halle, they show Francke's influence, just as the regulations of the previous century showed the influence of the *Schulmethodus* of Gotha. The *Schulordnung* of the schools at Halle was issued in 1702, that of Waldeck in 1704, Saxony in 1724, Württemberg 1728, and Prussia in 1736.

<sup>1</sup> Eckstein, *Die Gestaltung der Volksschule durch den Francke'schen Pietismus*, Leipzig, 1867.

It is very difficult to say just exactly what the results of pietism were. At least, one is justified in saying that more general education was provided for the poor, that the beginnings of teacher training were begun under the leader of the movement, and that the method of teaching by pure memorization received a setback, though to no great degree, in view of the extent to which it is still employed in Germany to-day.

Rousseau's educational theories transplanted on German soil gave rise to a movement known as *philanthropinism*, a movement which may be looked upon as a forerunner of the newer pedagogy, although it had not so very much direct influence upon the elementary schools of the time. The period of childhood in the age of Louis XIV was one of torture. School was a place of punishment. Memorization was almost the sole method of instruction and the rod furnished the chief incentive.

A list of punishments and the number inflicted during a period of service of fifty-two years, has been left us by a Swabian elementary school teacher.<sup>1</sup> It is an interesting commentary on the school life of the time.

Frederick William I has been called the father of the Prussian *Volksschule*. He was deeply imbued with the conviction that cultivation of mind and heart was the firm foundation of his people's happiness. He made the beginning of this foundation on which the elementary school system in Prussia rests to-day. The schools in 1713, the year of Frederick William's accession to the throne, belonged to the church, and only in so far as the state controlled the administration of the church had the state had anything at all to do with the schools. Up to this time the chief aim of the school and its work had been to prepare the children to take part in the life of the church.

<sup>1</sup> Strack, *Geschichte des deutschen Volksschulwesens*, p. 275.

Frederick William did not change this suddenly, but he took the first step in making the elementary school an institution of the state, a task which even now has not been fully completed. He set a general training as the aim of the *Volksschule*.

Frederick William I had scarcely ascended the throne, when he issued the first general school law, known as the *Reformierte Gymnasien- und Schulordnung v. 24. Oktober 1713*.<sup>1</sup> It was in itself not complete, but was enlarged from time to time by various edicts. This regulation or law shows very distinctly the influence of Francke in that the chief weight was laid upon education such as would make the children pious and God-fearing. In 1715 another regulation was issued which established inspection of the schools. This inspection was placed, of course, in the hands of the clergy. Clerical supervision was by no means new in Germany. Largely as a result of this law it came about that in later years the supervision of the schools lay so largely in the hands of the local pastors and the superintendents. The inspection concerned itself chiefly with the ability and character of the teachers and the methods employed.

In 1717 the king issued a general compulsory attendance law. Parents were required to send their children to school regularly between the ages of five and twelve. The tuition for each pupil amounted to five *Pfennige* a week, or a little more than one cent in American money. The term of compulsory attendance extended to the end of the twelfth year, but in reality they could be held in school until they were considered sufficiently equipped in religion, reading, writing, and arithmetic. Peculiarly enough the termination of the compulsory period in Prussia to-day is not set at any definite date, but ends with confirmation, or at the time when the school and church authorities decide that the child has acquired sufficient knowledge. This point is commonly accepted to be at the end of the

<sup>1</sup> Vormbaum, Band I, 210 ff.

fourteenth year. It only goes to show how strong the hold of custom is upon the schools. It must not be understood that this compulsory school regulation was fully enforced right from the very start. In the country especially it was not enforced, first on account of the poverty of the parents, although the law provided for such cases, and second, because of the unwillingness of the patrons (landlords) to support the schools. The king had the soldiers taught in order to increase the number of those who could read and write, and also ordered that no one should be confirmed who could not read. These regulations applied to all Prussian lands except Cleve. The schools in Pomerania were, or had been, neglected, and the king issued numerous regulations for the benefit of that province.<sup>1</sup> For the most part, these regulations were repetitions of earlier ones during his reign, but Article 3 of the regulation of July 6, 1735, is of special interest in that it says: "Pastors must employ no teacher without an examination, or without the knowledge of the presiding officer (*præpositus*) of the synod." This was indeed a great step in advance, though, to be sure, the requirements of this examination were not very severe. In another regulation for the Pomeranian schools, in 1736,<sup>2</sup> general school and church conferences were ordered for every three years. These conferences were to discuss the conditions of the schools and measures to be taken for their betterment. They determined whether there were teachers or sacristans in all communities, and whether the teachers had been examined. Salaries, methods of teaching, conditions of school buildings, and the teacher's dwelling also came in for reports and discussion.

The schools in Pomerania were supported according to the regulations of a rescript of 1737. In general, the teachers were paid out of funds obtained by the rent of common lands and tuition fees. Article 5 of this rescript throws an amusing light

<sup>1</sup> Rönne, I. Teil, p. 126 ff.

<sup>2</sup> *Ibid.*

on the social condition of the teacher. It is as follows:<sup>1</sup> "Only such persons shall be employed as teachers, who can do work outside of school and thereby earn something, so that they will not become entirely a burden to <sup>Teachers</sup> the community." There were other regulations by the king which affected the social position of the teacher. In 1722 Frederick William decreed that the only handworkers who could be employed as teachers were tailors, weavers, smiths, wheelwrights, and carpenters. Again, in the "Declaration of May 2, 1736," he ordained that teachers, who also followed the tailoring trade, could employ no more than two helpers and could make clothes for the peasants only. Still again, in a rescript, the king ordered that outside of the sacristan and teachers there should be no tailors in the country communities at all. It is perfectly clear from such regulations that it never occurred to any one that a teacher should not also have a trade, and it was not until a long time after this that the country teacher was made independent of outside work. At that time a teacher's salary was reckoned in tuition fees, income from the trade, wood and food furnished by the community, and use of land, the latter two of which items survive until to-day.

The condition of the schools in East Prussia was particularly poor. In order to regulate and encourage the establishment of new country schools in this province, Frederick William issued in 1736 the *Principia Regulativa*, a general plan for the foundation and support of elementary schools.<sup>2</sup> The most important parts of the law are as follows:

1. The associated communities shall establish and support schoolhouses just as they do parish houses.
2. His majesty will furnish free building material. Doors, windows, and stoves will be provided from the common funds.

<sup>1</sup> Rönne, I. Teil, p. 124 ff.

<sup>2</sup> Lewin, *Geschichte der Entwicklung der preussischen Volksschule*, p. 55 ff.

3. His majesty will furnish fuel free, which the communities must deliver.

4. Every church, in the city as well as in the country, shall pay four (4) *Thaler* (\$3.00) every year for the support of the teacher, in return for which the pastor shall require the teacher to help in the church service, that is, in cleaning the church. The præcentores receive no part of the four *Thaler*, which are solely for the maintenance of the teacher.

5. Also for the benefit of the teacher a cow and a calf, a couple of swine, and some poultry are kept free on the commons, and some hay and straw are furnished free.

6. The teacher receives a *Morgen* of land from the king. . . . The community work the land and keep it in good condition.

7. The teacher also receives from all the peasants of his district one fourth *Scheffel* of rye, and two *Metsen* of barley (one *Scheffel* is about fifty-five liters or sixteen *Metsen*) for each *Hufe* of land (*Hufe* of land is equal to seven and a half Hectars or thirty *Morgen*). . . .

8. Every pupil from the age of five to twelve pays the teacher yearly fifteen Prussian *Groschen* (forty-five *Pfennige*).

Thanks to Frederick William's increasing efforts the actual conditions of the schools were greatly improved. Before his death 1160 new elementary schools had been established in East Prussia and Littau.<sup>1</sup> The king recognized the value of well-prepared teachers and gave liberal support to every institution which undertook the training of teachers. To be sure the number of trained teachers at this time was very small, and it is due to this fact that the Prussian *Volksschule* made nothing more than a solid beginning during the first half of the eighteenth century.

In the first half of his reign Frederick the Great did very little for the development of the *Volksschule*, simply because he was too busy waging wars against his many enemies. In the latter

<sup>1</sup> Lewin, *Geschichte der Entwicklung der preussischen Volksschule*.



half of his reign he gave much encouragement and real support<sup>1</sup> to the elementary schools. Although he himself was a freethinker, Frederick wished that his people would return to the faith of their fathers, and for this reason he en-<sup>Frederick the Great</sup>couraged the work of Julius Hecker, who worked great reforms in behalf of elementary education.

Johann Julius Hecker, born at Werden in 1707, took up the study of theology at Halle, while there came under the influence of Francke, and became so much interested in the latter's pedagogical reforms that he entered the *Seminarium præceptorum* and afterwards became a teacher. It was in Halle that Hecker became acquainted with Semler's *Realschule*, for the further development of which the former did so much. In 1739 Hecker was called to be pastor at Berlin. Aside from his pastoral duties he found time to improve the schools. He established four-grade schools in which almost five hundred children were trained according to the methods which Hecker had learned at Halle. In 1747 he established his famous *Realschule*, which prospered in a very unexpected manner and its influence has never waned since that time.

But Hecker needed capable teachers for his school, and being unable to obtain suitable ones, he recommended to the king that the latter establish a normal school for the training of elementary teachers. So in 1748, in connection with the *Realschule*, Hecker opened his school for teachers, which, of course, was modeled after the training school of Francke in Halle. Frederick supported the institution as liberally as he could, and with the combined efforts of monarch and schoolmaster, a very important step had been taken in the training of teachers.

Practically no progress was made along educational lines until peace was finally made in 1763. The condition of the schools in the country and in small towns was wretched. A report<sup>1</sup>

<sup>1</sup> Clausnitzer, *Volksschulpädagogik Friedrichs des Grossen*, p. 58 ff.

dealing with the condition of the schools at that time says: "That the country schools in our Mark are in a state of decay, none can deny. That great injury is done thereby, that the youth, and the cause of the king and the nation suffer, is plain. It is to be regretted that there are many villages in which only one or two are able to read and write, so that the regiments cannot find a good sergeant, and it is often very difficult for them to understand the written proclamations of the district administrators. The cause of this decay is not a lack of regulations and orders, but a lack in their execution. . . . The officials, noblemen, and judges receive their commands, publish them, and there the matter remains." Then the writer goes on to give other causes of poor schools, chief among them being the incapacity and immorality of the teachers.

Hecker worked out a school law for the regulation of the country and village schools. It was the first and last law which Prussia has had that touches all sides of the question. It appeared in 1763. We have not space to give the law in its entirety, but we recommend it to those interested, because it points out very clearly the direction which the German elementary school was to take and which it has taken. The topics touched upon by the law were compulsory attendance, school year, school day, school fees, discipline, teachers, course of study, methods, and school supervision and administration.

By the new law the principle of compulsory attendance was reasserted, the country schools were taken from under the care of the nobility and put under the protection and supervision of the state; the supervision of the schools was to be exercised as before by the clergy, but in behalf of the state; the whole procedure of instruction was regulated by law, school hours, curricula, and schedules; text-books had to be approved by the authorities thereafter.

**General**  
**Land-Schul-**  
**Reglement**

**Meaning of**  
**the Law**

MORNING					AFTERNOON	
	8:00-8:30	8:30-9:00	9:00-10:00	10:00-11:00	1:00-2:00	2:00-3:00
Teacher of the Lowest Class	Prayer. Singing. Roll Call. Reading aloud of the catechism assigned for learning	Learning the letters by use of charts	Spelling and Reading	Arithmetic	Prayer. Roll Call. Learning of the letters. Spelling and Reading	Writing
Teacher of the other Class	As above	Reading of French Words	German Reading	Arithmetic	Prayer. Roll Call. Orthography and Reading	Writing. Twice a week, $\frac{1}{4}$ hour dictation and $\frac{3}{4}$ hour correction. Teacher sets the copy
Teacher of the Highest Class	Prayer. Roll Call. Rules of German Language from Michaelmas to Easter. Reads aloud short stories or fables from a good book. Pupils tell what they have been told, in order to learn to express themselves correctly. They write at home what they have heard at school, and bring it to school next day. Teacher corrects the errors. From Easter to Michaelmas he drills them in essay and letter writing.		Beginning Latin for boys going to higher schools	Music	Prayer. Roll Call. History. Use of Dictionary	French and also knowledge of things ( <i>Realien</i> ) which add to the happiness of human society.

The law was a model for its age, but, unfortunately, it was not enforced in all parts of the kingdom, because the communities were struggling under financial burdens already too heavy. The state itself could give no assistance. Then, again, lack of teachers and low salaries offered great obstacles to a successful carrying out of the law. Further, the nobility, just as they are to-day, were opposed. In Heppe (vol. 3, p. 37), we read that the state of officials and nobility wished to keep the peasant ignorant and uncultured, so that he would be that much the more willing to work the fields and fill the coffers of his lord. Beckdorff (*Jahrbücher*, vol. III, p. 42 ff.) in speaking of the situation says that the intentions of the king and the Consistorium in Berlin were baffled, first, by the unwillingness of the nobility, officials, magistrates, and even clergy to perform their duty; second, by a lack of capable teachers and of normal schools; third, by low salaries; and fourth, by the wretched conditions existing in the school buildings or rooms in which the classes were held.

The *Reglement* of 1763 was for the evangelical schools. In 1765 the *General-Land-Schul-Reglement für Katholischen Schulen* in Silesia and Glatz was issued, but it was no more joyfully received than the first regulation had been, to which the latter regulation was very similar. The table on the previous page is the schedule of the village school as drawn up in the regulation, which is printed at length in v. Rönne.<sup>1</sup>

In this Catholic school regulation a better training of teachers was demanded in that the teachers were required to attend normal schools whenever possible. Compulsory school attendance, free tuition for poor children, higher salaries, and better school buildings were some of the features which received especial attention. The subjects of instruction were religion, German,

<sup>1</sup> *Das Unterrichtswesen des preussischen Staates*, vol. I, p. 131.

singing, writing, arithmetic, orthography, history, and natural science. This is one of the first times that the subjects known as the *Realien*, which include geography, history, and natural and physical philosophy, were introduced into the elementary schools.

The prejudice of the people against the methods used and the text-books adopted, the poverty of the parents, poor salaries, the opposition of the lower classes to all education, and illy prepared teachers were the causes of the small success which this regulation attained. Failure

Upon the first partition of Poland, in 1772, the lands which fell to the share of Prussia were in a very bad state educationally. There were practically no schools at all, and to combat the influence of Polish serfdom, Frederick the Great ordered that schools with German teachers be established. To further this project, Frederick set aside a fund of six hundred thousand marks, from which an income of thirty thousand marks was derived.<sup>1</sup> This income was sufficient to establish one hundred seventy schools. Since there was a great lack of teachers, a large number were imported from Saxony; but to create a supply of teachers for the future, a number of normal schools were established, in Dexen in 1774, in Minden in 1776, and in Halberstadt in 1778. In spite of these efforts there was still a lack of teachers. To overcome the want, Frederick ordered that cripples from the army should be employed as teachers and sacristans in the village. The Minister von Zedlitz opposed filling the schools with cripples, but the king insisted that the old soldiers deserved being taken care of, inasmuch as they had risked their lives for their country. As a matter of fact, few of these crippled soldiers were fitted for teaching, but Schleiermacher<sup>2</sup> remarks that in many cases Improvement of Schools in West Prussia

<sup>1</sup> Bona-Meyer, *Friedrichs des Grossen Pädagogische Schriften*, p. 22 ff.

<sup>2</sup> *Ibid.*, p. 25.

these soldiers made good young Germans out of the youths, which was a great deal more than many teacher-tailors and teacher-cobblers accomplished.

Frederick the Great, as many of his successors, adopted the policy that it was unwise to educate the lower classes too well, for he felt that it tended to make them dissatisfied with existing conditions. In a letter to Minister von Zedlitz in 1779, he wrote as follows :<sup>1</sup>

It is well that the teachers in the country instruct the young in religion and morals, and they must not depart from this practice, in order that they may remain content with their religion and not become Catholics, since the Protestant faith is the best, much better than the Catholic. Therefore, the teachers must take pains that the people retain their attachment for religion, and educate them far enough that they neither steal nor murder. Thievery will not cease, that is human nature; for naturally all people are thieving. . . . In Lauenburg and Büten it is more necessary than elsewhere to give the children a better type of education, as it is sadly deficient there. The education in Altenburg is very good and the people there are orderly and well-behaved. If we could get teachers from there who were not too expensive, it would be very fine. You see what can be done about that. It is sufficient in the flat country (northern Germany), if the people can read and write a little; for if they know too much, they rush off to the cities and want to become secretaries or clerks, etc. For this reason, we must so arrange the instruction of the youth in the flat country that they learn that which is most necessary for their knowledge, yet they must be taught in such a way that they will not run away from the villages but remain there contentedly. . . .

FREDERICK.

The king wished the training of the youth to be regulated according to the needs of their later occupation and position in life. By limiting their education, it was practically certain that the boys and girls of the lower classes would be compelled to follow the same occupations which their parents followed, and would most likely remain in the same community. Prussian

<sup>1</sup> Bona-Meyer, p. 170.

kings have always desired that all their subjects belonging to the lower classes be educated to a certain extent and "in such a way" that they be content with their appointed lot. It has been by the method of instruction, perhaps, more than by the content, that the German elementary school system has produced the tractable, easily managed citizen.

About the middle of the eighteenth century the rationalistic movement, which came to Germany from England by way of France, began to crowd back the pietistic movement. The rationalists rejected every supernatural revelation <sup>Rationalism</sup> and recognized those principles of faith only which can be conceived of by human reason, such as belief in a God, virtue, immortality, etc. This period was known as the Enlightenment. The philosophical pedagogical tendency of this period had for its purpose the free and natural development of man. Its chief principle was to bring about the earthly happiness of man. Its representative in England was John Locke; and Jean Jacques Rousseau in France. In Germany the adherents of this movement were called *philanthropinists*, among whom were Basedow, Salzmann, and Campe. They strove to free man, and youth as well, from every form of compulsion. Hence as educators they advocated milder discipline, physical training, practical and useful subject matter, and instruction as pleasing and attractive as possible. Frederick the Great, under the influence of Voltaire, encouraged these pedagogical and religious doctrines in every possible way. Among the philanthropinists who were particularly active for educational reform in Prussia were Minister von Zedlitz and Eberhard von Rochow.

Frederick gave von Zedlitz charge of the educational and religious affairs of Prussia in 1770. Von Zedlitz had studied at Halle and while there had come under the influence of John Locke, upon whose treatise on education he had <sup>Zedlitz</sup> heard lectures. His greatest interest lay in the reform of the

elementary schools, as a result of which he issued a school law for the Duchy of Cleve and the Mark in 1772.

According to the regulation all children were to attend school from five or six, to thirteen or fourteen years of age. The personal side of the teacher was greatly emphasized and discipline was made much milder. The physical and moral health of the children was a subject of greatest concern to the teacher. The subjects of instruction were religion, reading, writing, music, arithmetic, and nature study. The schools were frequently inspected and supervised by the inspectors, who were generally clergymen. The chief difference between this regulation and those of a few years earlier in the time of Hecker was in the amount of emphasis that Zedlitz laid upon the spiritual qualifications and the personality of the teacher. Teachers were to be examined in content and in method. They were compelled to exercise a greater degree of mildness toward children, and to make instruction as pleasant as possible. In the course of study less attention was given religion and catechism, while more time was given to "sharpening of the understanding," and the acquirement of useful and practical facts. This was the real beginning of the introduction of the *Realien* into *Volksschulen*.

Eberhard von Rochow did more effective work than Zedlitz for the betterment of the village schools. Rochow had been an officer in the Seven Years' War, and as a result of a wound was incapacitated for further service, after which time he devoted himself to his estates in the vicinity of Brandenburg. Later he was made canon of the cathedral at Halberstadt, where he materially improved the *Volksschulen* and established a normal school which still stands to-day. He did his best work, however, on his own estates. In 1771 there was famine and pest throughout the land; and it was during this time of distress that Rochow saw that the only true basis of help for the lower classes was education — education away from super-



stitution and poverty which were on every hand. He believed that this could be done best by an improvement of the village schools.

This improvement was to be brought about in several ways. First of all, he demanded that a rural school should no longer be taught by artisans and ignorant servants, but that all teaching positions be filled by theological candidates or young men who had enjoyed a good education. Bases of  
Improvement Second, the teacher should receive a salary of at least three hundred marks a year in addition to fuel, dwelling, garden, and the like, in order that he could devote his entire time to school work. Third, the schools were to have at least two classes each. Fourth, the schoolrooms were to be kept clean, well ventilated, and attractive. And fifth, instruction was to be free. Rochow wrote the first German reader, the "Children's Friend," which was said to be the best reader for children ever written up to that time.<sup>1</sup>

Still more important for the development of the *Volksschulen* were the model schools which Rochow caused to be established in the villages upon his estates. The best known school thus founded was the one at Reckahn. Rochow The School  
at Reckahn had published a book entitled "Instruction for Country School Teachers." It so fired the enthusiasm of the young church organist of Halberstadt, Heinrich Bruns, who had previously been Rochow's secretary, that in 1773 he offered himself to Rochow as teacher in this village school at Reckahn. He received one hundred eighty *thalers* (540 M.) yearly, in addition to dwelling, garden, and supplies. The school proved to be a great success and many similar ones were established. Bruns was so successful in carrying out Rochow's ideas, that within the first ten years of the school's existence more than one thousand visitors, among whom were Basedow and Salzmann,

<sup>1</sup> Lewin, *Geschichte der Entwicklung der preussischen Volksschule*, p. 125.

had journeyed to Reckahn in order to make a study of the system and methods there in vogue.

No one influenced the development of the Prussian elementary school during the last half of the eighteenth century more than did Rochow. He was called the Pestalozzi of Prussia. His influence was somewhat lessened after the death of Frederick the Great, due to the deleterious influence of Wöllner, who came into educational prominence in the reign of Frederick William II.

Of the many proposals which were advanced by von Zedlitz, who was continued as Minister for two years under Frederick William II, the establishment of an *Oberschulkollegium* to control the entire school system of Prussia was the only one that was immediately realized. The establishment of this controlling body was of great importance for the development of the Prussian school system, inasmuch as thereby the schools were withdrawn from ecclesiastical control, and school and church discipline were separated. The *Oberschulkollegium* stood directly under the king, and to it were given the entire control and management of the whole school system.<sup>1</sup> Von Zedlitz was not allowed to see many of his reforms carried out, for he was removed in 1788 and succeeded by von Wöllner. He was the leader of a movement antagonistic to the Enlightenment and Philanthropinism of the early and middle eighteenth century. Immediately on becoming Minister, von Wöllner issued a religious edict which was intended to strengthen the power of the established churches and which made it almost a crime to express anything but an orthodox opinion.

The establishment of normal schools in various parts of Prussia was one of the important things which Wöllner accomplished. Also during his ministry, new subjects were introduced into some of the schools. Boys were instructed in basketry and tree and bee culture, while the girls

The  
*Oberschul-*  
*kollegium*

Advanced  
Steps

<sup>1</sup> Rönne, part i, pp. 76-77.

were taught sewing. It is also interesting to note that the salaries of teachers increased greatly before the end of Frederick William's reign.

In spite of all the efforts made in the latter half of the eighteenth century, the *Volksschulen* were still in a wretched condition. Bassewitz says of the schools in Brandenburg: <sup>1</sup>

School Conditions at the End of the Eighteenth Century

The condition of the higher and lower elementary school, both in the cities and rural districts, was very poor. Outside of the normal school in Berlin, there was only one training school for Lutheran school-teachers in the electorate. The activity of the teachers — scarcely one sixth of even the most meager training — met therefore with little success, as later experience demonstrated. The largest number of the other teachers in the flat country were either entirely without training, except the few who had received some instruction from the clergy, or were selected entirely from invalids, patch-tailors, night watchmen, or shepherds. . . . It was no wonder then the rural youth grew up without training or religion, and the parents lived in deep ignorance and even immorality. . . . In the towns and in the small cities the conditions were little better than in the country. Even in the middle-sized cities, there was generally only one class for the boys and girls together. The city authority did very little for the improvement of either schools or teachers. Conditions were best where candidates in theology took over the rectorship of the so-called Latin schools. One tried first this, and then that, for the improvement of the conditions of the country school-teacher, but all to no purpose. . . . Through the introduction of silk-raising an effort was made to better the economic position of the rural teacher. All rural teachers at one time or another occupied themselves with the silk industry, and earned ten, twenty, or thirty *Thalers* a year, and sometimes more.

Even as late as 1870 a few rural teachers were engaged in raising silk.<sup>2</sup>

One of the most important measures in the history of the Prussian *Volksschule* was the *Allgemeine Landrecht* of 1794, for

<sup>1</sup> Thilo, *Preussisches Volksschulwesen nach Geschichte und Statistik*, Gotha, 1867, p. 51 ff.

<sup>2</sup> *Ibid.*, p. 51.

it made the state absolutely supreme in educational affairs. We quote some of the provisions of this code which deal with the secularization of school affairs.

Section 1. Schools and universities are state institutions charged with the instruction of the youth in useful information and scientific knowledge.

Section 2. Such institutions may be founded only with the knowledge and consent of the state.

Section 9. All public schools and educational institutions are under the supervision of the state and are at all times subject to its examination and inspection.

Section 10. No one shall be denied entrance into the public schools on account of difference of religious belief.

Section 11. Children who are to be educated in another religious faith than that of the school which they attend, cannot be compelled to take the religious instruction in that school.

Section 12. The common schools, which are devoted to elementary instruction, are under the direction of the local authorities of each locality, which authority, however, must always consult the clergy of the community to which the school belongs.

Section 13. It is the duty of the pastor of every community, both in the city and in the country, of the justices and courts, and also of the police magistrates, under the direction of the local authorities and clergy, to take over the inspection of the outer organization of the school and the execution of the adopted school regulations.

Section 14. They must, in connection with these duties, report to the civil and religious authorities all deficiencies and irregularities for the purpose of closer investigation.

Section 15. The civil and religious authorities must respect the regulations issued or approved by the state and must not

introduce or undertake anything of their own accord that would be contrary thereto.

Section 18. Schoolhouses enjoy the same privileges as church buildings.

Section 22. The appointment of teachers belongs as a rule to the civil authority. Appoint-  
ment of  
Teachers

Section 24. But in no case shall a teacher be appointed, who has not previously passed an examination and received a certificate of ability to perform the duties of the office.

Section 29. Where there is no foundation fund for the common schools, the support of the schools devolves upon all the heads of families of each community without distinction as to religious confession, and without distinction as to whether they have children or not. Support of  
Teachers

Section 30. If several common schools are established in one locality for its inhabitants of different religious confession, then each citizen is obligated to the support of the school of his religious faith only.

Section 31. The amounts raised, which consist of money and supplies, must be divided equally among the heads of families according to their wealth, and must be approved by the civil authority.

Section 32. Consequently, the children of such contributors are forever free from tuition.

Section 34. The maintenance of school buildings and teachers' dwellings must be borne by all the patrons of the school. School  
Buildings

Section 43. Every inhabitant who cannot, or will not, furnish the necessary instruction for his children at home, is compelled to send them to school after they have completed their fifth year.

Section 44. Only with the consent of the civil and religious authorities is a child allowed to postpone attendance at school. . . . Compulsory  
Attendance

Section 46. Instruction in school must be continued until, in the opinion of the pastor, the child has acquired that knowledge necessary for every reasonable man in his walk of life.

Section 47. The school inspectors are required to see that the teachers perform the duties of office faithfully and zealously.

Section 48. It is their duty, with the aid of the civil authority, to see that all children of compulsory school age are kept in school, if necessary by force and by punishment of negligent parents.

Section 49. The local pastor is obligated to aid actively in accomplishing the purpose of the school not only by inspection, but also by giving instruction to the teacher and the pupils.

Section 50. School discipline may never amount to mistreatment, which might in any way be injurious to the health of the children.

Section 51. If the teacher believes that by the lighter punishments addiction of the child to evil and corruption cannot be avoided, he must then make a report to the civil and religious authorities.

Section 52. The latter must then, in conference with the parents or guardians, examine the matter more closely and adopt measures necessary for improvement.

Section 53. But in no case may the limits prescribed for parental discipline be exceeded.

None of the ideas contained in the above quoted articles were entirely new, but the General Code was of particular value because it restated and emphasized several principles upon which all subject legislation regarding the Prussian *Volksschule* is based. The most important of these principles were that the schools were state institutions, that education was compulsory, and that the community was responsible for the maintenance of its schools.

Even if we are able to mark here and there steps of progress taken during the reign of Frederick William II, there was nothing accomplished of vital importance which had not already been done, unless we name the formulation of educational law as found in the *Allgemeinen Landrecht*.

When Frederick William II died, he left behind to his young son an unenviable heritage. Prussia was then tottering and was destined to become shortly almost a vassal state of Napoleon Bonaparte. The Prussians were trusting to the former greatness and reputation of Frederick the Great's armies to save them from the all-destroying hand in the West. The Prussian discipline, simplicity, and piety of earlier days had been wiped out, partly by the spirit of the age, and partly by the example set by the ruling classes. Ignorance, desire for luxury, and personal gain had driven ideals of duty and service and ability for sacrifice from the hearts of the people. The unity between the masses and the higher classes was broken down, and consequently patriotism decreased in an alarming degree.

Frederick William III was very different from his father. Where his father desired only splendor, the new king preached simplicity; where the father insisted upon orthodoxy, the son advocated freedom of religious belief. Prussia was particularly fortunate in this time of stress to have such a man at the head of the government, and Prussia was still more fortunate in the fact that Louise of Mecklenburg-Strelitz was the wife of their king, for her example in womanly virtues, faithfulness, and patriotism made her the most beloved queen that ever graced the royal throne.

One of the first acts of the new king's reign was to dismiss Wöllner from office because of the latter's insistence upon examination for all teachers and clergy to determine their ortho-

doxy. Von Wassow was appointed to succeed him. The king in a *Kabinettsordre* of 1798 said:<sup>1</sup>

I consider that the school system in my whole kingdom is a subject which deserves general attention and care. Instruction and education make the citizen, and both are, as a rule, intrusted to the schools, so that their influence upon the welfare of the people is of greatest importance. This fact has long been acknowledged, but nevertheless, we have given that care almost exclusively to the higher schools which was due the town and country schools, not only because a very large majority of our subjects are in need of such training, but also because thus far, with a few exceptions, nothing at all has been done for them. Therefore, it is high time to provide for the purposeful education and instruction of the children of the middle and peasant classes.

At the same time the king ordered an investigation of the schools in order that the manner and means of their reform could be determined.

The reports<sup>2</sup> which came in as a result of the investigation gave a picture of conditions in the schools which show the schools in a none too favorable light. In Brandenburg there were two thousand two hundred forty-two town schools, sixteen hundred seventy-three of which were of elementary rank, and to all intents and purposes

**Condition of the Schools**

1. **Number** were very similar to the country school. The salaries were wretched.

Of the sixteen hundred fifty teachers only one hundred ninety-five received more than three hundred marks (\$75) a year, fourteen hundred fifty-five received less, of whom

2. **Salaries** eight hundred sixty had yearly salaries of less than one hundred twenty marks (\$30).

3. **Houses** Almost all schoolhouses had only one room, in which the teacher's family generally lived, and where frequently the teacher carried on his trade, tailoring being a

<sup>1</sup> Keller, *Geschichte des preussischen Volksschulwesens*, p. 133 ff.

<sup>2</sup> Heppe, *Geschichte des deutschen Volksschulwesens*, vol. III, p. 76 ff.



popular handicraft for teachers. In this respect teachers had not improved for several centuries.

The school attendance was poor everywhere. There was no school at all in summer months, and in winter the attendance was exceedingly irregular, the children remaining away from school for weeks at a time. As soon as the children were ten or eleven years of age, the parents would keep them at home to do all kinds of work and would frequently hire them out as servants.

Provision for the education of girls, as has always been the case in Germany, was the most wretched of all, both in the city and in the country. As a rule, the girls of all sizes were taught as one group regardless of their ages and ability. Unless the wife of the parish sexton instructed the girls in sewing, they went without the most useful subject of instruction in the present-day curriculum, if we except German itself.

The establishment of "industrial" schools in the last decade of the eighteenth century was a marked step in advance. There were schools in which, besides the ordinary subjects, instruction was given in spinning, knitting, sewing, forestry, gardening, and silk-raising. Teachers suitable for such work, as well as proper equipment, were lacking. The condition has never been entirely overcome.

Another type of popular education found its expression in the "garrison" schools which had been established in the last quarter of the century. These schools had been established for the purpose of educating the soldiers while serving in the army. Many of these schools became permanent features of the regiment's life. In connection with these schools there can be detected the Hohenzollern fear that the people (*das Volk*) would receive an education of too wide an extent. It came about that the teachers of some "garrison" schools

became ambitious and placed the goal of the course too high. The king looked on this with disfavor because he believed that beyond a certain point education for the masses was very dangerous. The following extract from a circular order of August 31, 1799,<sup>1</sup> will illustrate this point.

. . . Inasmuch as I have taken the pains to become acquainted with the inner organization of some "garrison" schools, I find that many have set for themselves goals which involve much difficulty in reaching and which go too far beyond the province of the "garrison" schools. Even if such difficulties were overcome, still the practical student of men cannot be indifferent to the results which are bound up with all extremes and which would in the case of a too wide expansion of popular instruction militate more than anywhere else against the welfare of the whole people.

True *enlightenment*, in so far as it is necessary for his and the general good, is the incontestable right of that person, who, in the walk of life in which fate has placed him, knows his relationships and duties and has the ability to satisfy them. Therefore, to this purpose the instruction in all *Volkschulen* should be limited. The time which one applies therein to a superficial study of the sciences for which the ordinary man has little use is for the most part lost. He forgets quickly what he has heard, and there remain in his memory only incomplete conceptions out of which false conclusions arise, and tastes which his social standing does not allow him to satisfy, and which only make him discontented and unhappy. [As now, a meagerly educated, contented lower class was the wish of the king.]

Since the chief purpose of the "garrison" schools is to train future soldiers, it is only necessary to teach them what is necessary for the common soldier, under officer, and sergeant to know in order to fill their places as useful and contented men. Even if this demand seems small, it is not really the case, if it be entirely satisfied. I demand for the intellectual training of a soldier that he know exactly his duties as a man, as a subject, and as a soldier; that he be taught enough of the different trades which are suited to his position in life, and of the means of applying this knowledge, so that he can select those things for his future calling which correspond most closely with his inclinations and ability; and that he can read, write, and cipher well for the conduct of his own affairs as well as for the advancement to the position of under officer or sergeant, and that he acquire the

<sup>1</sup> *Zirkularverordnung vom 31, August, 1799.* Rönne, part 1, p. 89 ff.

information necessary for an artisan. A soldier fitted out with these qualities will be in his own place a useful servant of the state, and likewise a happy man, if no one seeks to awake in him a striving toward higher things. The seed of discontent with one's social station will develop in that degree in which one expands further one's scientific training. Only a few men in the lower classes are so neglected by Nature that they do not have the ability to accomplish more than their social position or calling demands, and to raise themselves to some higher position. A too expansive course of instruction will awaken the feeling of such ability in them, through application of which they would easily be able to gain for themselves a much more favorable fate than that of a common soldier. The result is that a superficial acquaintance with the sciences generally produces a disinclination toward learning a trade. The innumerable proofs of this fact which the larger schools furnish have not escaped my notice. I know very well that most of the sons of handworkers and artisans, who attend these schools, even if they possess only average ability, choose the troubled and uncertain career of an half-educated scholar rather than to take over the profitable business of their father, into which they could enter with ease, and in which they could well use the information acquired in school not only for their own good but also for the public welfare.

Pride, conceit, and disinclination to physical labor are usually the sources of all such foolish resolves, which under the same circumstances always bring the same results.

Even if the choice of a future calling open to the soldier is more restricted, he must still feel unhappy if the desire (for higher things) is once aroused in him and he is unable to satisfy it.

The teachers of some "garrison" schools have gone so far in their well-intentioned zeal that they wish to expand their course of instruction to include the study of countries, even the principles of mathematical geography, world history, statistics, international relationships, commerce, and the like.

This instruction may be so superficial that the greatest part is lost, as I have already said, and serves only for ranting in public examinations. It will always be better if the boy pass such time in the "industrial" school and earn some money, with which he can lighten his parents' burden, and increase his own ability in useful handwork.

Soldiers and under officers will complete their day's marches without knowing the latitude and longitude of the locality, and what they learn in common life of foreign countries will be a good substitute for the geography which is now removed. To what end would one desire to give instruction

concerning international relationships to those who, if ordered to march, would not once dare ask why or where? What good will it do the soldier, who must exist in his future calling on a small wage acquired by hard labor, if one shows him the ways whereby he, as a merchant, would be able to secure for himself the luxuries of life by means of easily earned money and without any real work?

The spirit of the age has aroused in all classes of society an unceasing effort to raise one's self above one's own social stratum, or at least to extend its pretensions higher. I very gladly make allowance for that which one must accept as a necessary result of the higher value of things. But the evil lies deeper and it must be strenuously combated, if all human relationships are not finally destroyed. I will, therefore, see that in all *Volks-schulen* such instruction be introduced that will instill in the younger generation more love and respect for the trade and social position of their parents. I hereby make it the duty of all military chiefs not to lose sight of this point of view.

The soldier must be instructed so carefully concerning the claims which the state has upon his services, and also concerning his duties and obligations, and likewise his rights, that his own judgment will lead him to be contented with his lot and that he will cease as far as possible to look with envy and secret hate upon his superiors.

Whoever has the ability to write a good text-book with this end in view can render great service to the future happiness of the soldiers and can be assured of my most earnest gratitude. I would desire that the religious instruction be included in this text, and that after the discussion of the Ten Commandments all civil crimes and their punishments be explained briefly and plainly in catechetical form. Such a book would in itself be more useful reading for the soldier than all the devotional books and would fully supply the lack of all popular magazines and newspapers, in which on every page one observes the financial speculations of the publishers more than any real advantage to the public, and through which only a hurtful thirst for reading is spread among the common people. Since the preparation of such a text will demand more time and thought than the compilation of any other previous text, I must express the desire that only men of recognized popularity and practical knowledge of affairs give time to it, and thereby bring it about that this text be used not only in the "garrison" schools, but also in the town and country schools.

I have not yet mentioned history, and only wish to remark that it should limit itself solely to the most important national events, and have no other

purpose than to awaken patriotic love and affection, pride in the deeds of our forefathers, and the desire to emulate them. . . .

As important as the establishment of "garrison" schools is, the benefit derived therefrom would be merely partial, if industrial schools were not connected with them in which soldiers' children can learn their future trade and be enabled by small earnings to compensate their fathers for the time the latter must pass in the "garrison" schools. . . .

FREDERICK WILLIAM.

Charlottenburg, August 31, 1799.

No passage in the history of the Prussian elementary school states so clearly the attitude of Prussian policy toward popular education. It aids in interpreting the methods and purposes of elementary education in Prussia and Germany to-day. The common man must have a limited amount of knowledge only, and it must be taught him in such a way that he can be logically content with his lot in life and may not look with envy and hate upon those who have been born in higher stations. This passage epitomizes the difference between the ideals of Germany and America with reference to the common people.

Significance  
of this  
Order

In spite of the efforts made by the Prussian kings during the eighteenth century to improve the elementary schools, the conditions were very deplorable at the opening of the nineteenth century before the Pestalozzian movement had made itself felt in Germany. Superintendent Oldeköp, in writing to Secretary Zerrenner of the Upper Consistory concerning the condition of the schools, said: <sup>1</sup>

The Volks-  
schule,  
under  
Pestalozzi's  
Influence

Every little hamlet had its own school but they were the so-called "rotation-schools." Only in the parish towns did one find permanent sacristans and teachers and real schoolhouses. In almost all other places the school was held in the houses of villagers and the location of the school changed every week. One had no other room for the school than the living-room of the countryman, in which during school time were to be found family, children, and strangers, who carried on their regular occupations.

<sup>1</sup> Schumann, *Geschichte des Volksschulwesens in der Altmark*, p. 439 ff.

Whoever had the school in his house fed the teacher. The latter was very frequently a cripple incapable of hard work, and generally a tailor. The community hired him usually for one winter only and gave him a very miserable salary, frequently but three *Thalers* (monthly), and in addition to that treated him with such disrespect and lack of appreciation that the shepherd was more honored in the village than he. The demands made, however, upon him were just as small. If he could read but poorly, sing the best-known church hymns, repeat the five articles of the smaller Lutheran catechism, and could write, then he possessed all the qualities necessary for a good teacher, and more was not required of him. For at that time people considered school attendance a minor matter with which one might fill up the tiresome hours of winter. No one thought of summer school at all, while winter school began on St. Martin's Day and ended at the beginning of Lent. The General School Code of 1763 seemed to be almost forgotten, at least it was not frequently regarded. So it was in our whole region (Brandenburg), and so it remained until 1816, when a new period in the improvement of our local country schools began.

Schumann, in commenting on the conditions, adds:<sup>1</sup>

There are plenty of examples where old loafers conducted school week about, and where shepherds, who herded flocks in summer, taught the youth in winter. . . . Such teachers naturally gave very wretched instruction. After the children had laboriously learned to read by the old alphabet method, which took up three or four years' time, they spent a large portion of their remaining time in school reading the Catechism, the Psalms, and portions of the New Testament. . . . Outside of this work the larger part of the time was given up to memorization of the Catechism, Psalms, Biblical passages, and church hymns. Since the necessary attention and industry for such deadening work was often lacking on the part of the pupils, the rod was the magic wand which had to awaken diligence and open the doors in the heart and mind of the child for religious training.

School work usually began at eleven years of age. The pupil was required to imitate for years the handwriting of his teacher without learning to read what was written. As a rule girls did not learn to write. Arithmetic, but only mechanical work according to set rules, was taught in a few schools and then only in classes for which a special fee was charged. Only church songs were sung, for folk songs were considered vulgar and not to belong in the school. The singing was largely screaming.

<sup>1</sup> Schumann, p. 440 ff.

Frederick William III (1797-1840) and his consort Queen Louise had been interested in the Pestalozzian movement since the beginning of their reign, but owing to the fearful struggles in which Prussia was involved and to the depths of political anarchy to which the state had fallen, little of good had resulted. After the close of the unhappy war of 1806-1807, and the defeat of the Prussian armies, the leading spirits of the nation and the real founders of Germany's present greatness insisted upon a religious moral regeneration of the German people and a revival of the national feeling. The schools, particularly the lower, have been responsible for this revival, which has been the most remarkable political transformation of the past one hundred years. The philosopher Fichte, in his "Address to the German Nation," pointed out that an entirely different system of education was the only saving means. He demanded the education of the nation as such, the education of all classes, the high and the low, a German national education. Fichte emphasized particularly love of country — hence the emphasis upon history — and religious and moral education — hence the importance of religion in the curricula of all schools. In one of his addresses to his people he said :

It (patriotism, love of country) is not the spirit of quiet, civil devotion to the old constitution and to the laws, but the consuming flame of that higher patriotism, which enfolds the nation as the mantle of the Eternal, for which the noble will gladly sacrifice themselves.

Fichte called attention to the fact that such patriotism was rare and that this spirit of sacrifice for the sake of country must be instilled in the hearts and mind of the people before Germany would take a high place in the councils of the nations.

In 1809 the Prussian educational authorities decided to send several young men to Yverdon to sit under Pestalozzi and to learn his methods in order later to reorganize the schools in Prussia. Among these students were Marsch, Rendschmidt,

Braun, Steger, and Patzig, who after their return to Germany justified the hopes of the government in every respect.

Before the return of the young men who were studying with Pestalozzi, the Prussian government appointed Zeller, an associate of Pestalozzi, to the position of school superintendent in East Prussia. Among the important reforms due to his activity was the establishment of a normal school and an orphans' school at Königsberg. Later he established a Protestant normal school at Karalene, and a Catholic normal school at Braunsberg. The work in East Prussia had to be given up temporarily upon the opening of Napoleon's campaign against Russia.

Remarkable civil changes had taken place since Jena. The king, under the influence of Stein, Scharnhorst, Gneisenau, and Hardenberg, granted self-government to the cities and freedom. This had an immediate effect upon the schools. In 1811, "Instructions for the formation and management of city school deputations" were issued and these instructions form to-day the basis of the administration of the schools in cities. Not only in the cities but in the country the local boards were given in 1812 the right of partial control of school affairs.<sup>1</sup> By the participation of local citizens in the control of the schools the interest and spirit of self-sacrifice was enormously increased.

In 1817 a special ministry for religion, public instruction, and medical affairs was independently established and put on equal footing with the other ministries. Freiherr von Altenstein was the first minister and held office until his death in 1840. The organization of provincial and county school authorities was contemporaneous with that of the central authority. (See p. 59.)

Foremost among the teacher trainers in the Pestalozzian sense was Wilhelm Harnisch. Trained at the Plamann Pestalozzian Institute in Berlin, he became director of the normal school

<sup>1</sup> Von Bremen, pp. 517-536 ff.



in Breslau in 1812 and later at Weissenfels. The Pestalozzian idea had been introduced into Prussia at a time when the maintenance of any sort of public institution was an extremely difficult matter. In spite of all the odds <sup>Pestalozzians in Prussia</sup> against them we find a great number of men, fired with the spirit of von Stein and Pestalozzi, establishing normal schools and turning out large numbers of well-trained teachers. In addition to the names already mentioned some of the more important were: Grassmann, director of the normal school in Stettin; Möller, director of the normal school in Erfurt; Diesterweg, director of the normal school in Mörs, and Vormbaum, director of the normal school in Petershagen. Harnisch says:<sup>1</sup>

All these men and others are to be reckoned among those who conceived the *Volksschulen* from a patriotic standpoint, who wished thereby to raise the German people, . . . and to furnish the Prussian state new organs for its inner life and outward defense.

They were not merely instructors, they were not mere schoolmasters, they were educators of the people. Among their main tendencies were their observation and respect for the cultivation of the German tongue from a pedagogical and a patriotic standpoint, cultivation of music for the benefit of community life, drawing, religion, and physical education.

The Prussian elementary school system — the *Volksschule* in the present sense of the word — developed rapidly in all the provinces of the kingdom. The normal schools founded by the Pestalozzians were for the most part responsible for the remarkable change in the *Volksschulen*. In 1812 there were only seven normal schools in Prussia, while in 1840 there were forty-six normal schools with almost three thousand young students soon to enter the Prussian schools.

In 1826 regulations were issued for all Prussia to control the first and second teachers' examinations, thus putting the

<sup>1</sup> Harnisch, *Der jetzige Standpunkt*, p. 15.

minimum requirement for entrance into the profession upon a higher plane. These regulations are the basis of the present scheme of examination described in a later chapter.

Teacher  
Examina-  
tion

An attempt was made by Suvern and Altenstein in 1819 to pass a general law for the organization of all the schools below the universities. Their plan was to have the schools arranged in three divisions: the general elementary school, the general city schools, much like the middle schools of to-day, and the *Gymnasien*. Every class in society was to have its own particular school; each religion was to have its own schools. In fact many of the latter-day forms of organization were proposed, but due to the reactionary spirit which had set in, the scheme fell through. Even until to-day Prussia has no general school law. Each phase of the system is controlled by special regulations. According to figures collected in 1824,<sup>1</sup> the ratio of the children in school to the population was one to eight, which indicates a rather high percentage of attendance. In 1837 over eighty per cent of the children in Prussia attended school. However, in the eastern provinces the percentage of illiteracy ran as high as 41 per cent. In 1821<sup>2</sup> there were 21,885 teachers in the *Volksschulen* of Prussia, with an average annual income of 212 *Thalers* in the city, and 90 *Thalers*<sup>3</sup> in the country.

The supervision of the schools was almost entirely in the hands of the clergy. All children of five years of age were compelled to attend school, but were permitted to attend schools of their own confession. Tuition was charged in the *Volksschule*, amounting to six, nine, or twelve *Pfennige* weekly.<sup>4</sup>

<sup>1</sup> Eylert, *Charakterzügen . . . aus dem Leben des Königs von Preussen, Friedrich Wilhelm III*, part 3, p. 378.

<sup>2</sup> Beckedorff's, *Jahrbücher des Preussischen Volksschulwesens*, vol. I, part 1, pp. 72, 75.

<sup>3</sup> A *Thaler* is three marks or \$.75.

<sup>4</sup> Heppe, vol. III, pp. 150-155.

The subjects of instruction were religion, reading, arithmetic, and the elements of history, geography, and natural science. The school was divided into three sections just as it is to-day.

Frederick William IV became king of Prussia in 1840. In the same year Altenstein died and Eichhorn became Minister. At this time a sharp contest was raging between the conservatives and the radicals. The king and his minister were fanatically conservative, as were also Harnisch, Henning, and Kaweran (see p. 36). This party emphasized religion, patriotism, and authority. On the other hand the rationalists, whose leader was Diesterweg, demanded particularly instruction in subjects which serve best to train the understanding and reasoning power; namely, language, arithmetic, geometry, drawing, history, and science, while they neglected religion. In 1844<sup>1</sup> Eichhorn ordered shortening of the course of study in the *Volksschule*, and more time given to religion and to the study of the catechism. He held the doctrine that the *Volksschule* was an institution of the church, subordinate to it, working for it and under its supervision. The school-teacher according to his opinion was a servant of the church; the clergy were the superiors of the school and the teacher.

On the other hand Eichhorn introduced some new features into the curriculum of the *Volksschule* and the normal schools. In 1842 he emphasized the value of physical training in all schools. In 1845 sewing for girls was put into the schools. Since 1819 no attempt had been made to pass a national school law. Each province was allowed to regulate its own school affairs so long as nothing was done contrary to the then existent statutes. In the province of Prussia a general school law<sup>2</sup> was adopted regulating every phase of the external organization of the schools — while the internal affairs of the school were left entirely in the hands of the administrative county governments.

<sup>1</sup> Rönne, part 1, p. 649.

<sup>2</sup> Von Bremen, p. 36 ff.

In order to suppress the rationalist movement the authorities passed an order by which not only should teacher's libraries be supervised, but even the private books of teachers be inspected that any rationalistic literature might be discovered. This regulation brought on a great struggle between the central authorities and the majority of the teachers. Diesterweg was removed from his position as head of the normal school in Berlin and sent into retirement. Eichhorn's activities were soon over, for when the Revolution of 1848 broke out, he resigned and went into private life.

The new Prussian constitution<sup>1</sup> was issued in 1850. Articles 20 to 26 of the constitution established some very important principles relative to the status of the schools and of the teachers.

Art. 20. Knowledge and instruction therein is free.

Art. 21. The state shall make sufficient provision for the training of the youth. Parents and their representatives must not leave their children or their wards with the instruction, which is prescribed for the *Volksschulen*.

Art. 22. It is the right of every man to impart instruction and to found and conduct institutions of learning, when he has satisfied the state authorities concerned as to his moral, scientific, and technical fitness.

Art. 23. All public and private institutions of learning are under the supervision of authorities named by the state. The public teachers have the rights and duties of servants of the state.

Art. 24. In the establishment of public *Volksschulen* confessional relationships are to be taken into consideration as far as possible. The religious organizations concerned conduct the religious instruction in the *Volksschule*. The administration of the external affairs of the *Volksschule* is incumbent upon the community.

The state appoints, with legal participation of the community, the teachers of the public *Volksschulen* from the number of those qualified.

Art. 25. The means for the establishment, support, and extension of the public *Volksschulen* are raised by the community, and, in case of proven inability, supplementarily by the state. . . . The state assures

<sup>1</sup> Lewin, *Geschichte der Entwicklung der preussischen Volksschule*, p. 250.

the teacher of the *Volksschulen* a fixed salary, commensurate to the needs of the locality. Instruction is given free in the public *Volksschulen*.

Art. 26. A special law will regulate the entire school system.  
[This law has never been issued.]

In addition to these articles the School Supervision Law<sup>1</sup> of 1872 places in the hands of the state the supervision of all public and private schools.

1. With the removal of regulations of contradictory nature in the various provinces of the country the supervision of all public and private institutions of learning devolves upon the state. Accordingly all officials intrusted with this inspection perform their duties in behalf of the state.

2. The appointment of local and district school inspectors and the definition of their inspection district belongs solely to the state. . . .

3. The participation in school inspection belonging to the communities and to their local boards remains unaffected by this law as well as does Article 24 of the Constitution of January 31, 1850.

4. The Minister of Religious, Educational, and Medical Affairs is commissioned to execute this law.

In 1854 a series of regulations, three in all, were issued by the minister, who was a leader of the religious-conservative party. These regulations dealt with (1) the training of teachers in Protestant normal schools; (2) the normal preparatory schools; (3) and the one-class elementary school for Protestant children. The general tendencies of these regulations will be shown when compared with those of 1872, which form the basis of the *Volksschule* in Prussia to-day.

In comparison with the salaries received by the teachers thirty-five years before, we find that in 1858 the actual conditions had improved somewhat. The city teachers received in the latter year an average<sup>2</sup> annual income of about 275 *Thaler* (\$206), while the rural teachers had an average income of about 200 *Thaler* (\$150). Of course in addition to this salary the teacher had free lodgings and some provisions in the way of fuel and food.

<sup>1</sup> Heinze, *Im Amt*, pp. 1-2.

<sup>2</sup> Diesterweg, *Jahrbuch*, 1858.

We find interesting statistics dealing with the Prussian *Volks-schulen* in the *Statistischen Nachrichten über das Elementarschulwesen in Preussen für die Jahre 1862 bis 1864*.

There were in 1864, 25,120 public elementary schools with 38,053 classes, 34,803 male teachers, and 2016 women teachers. Sixty-six and two tenths per cent of the schools were Protestant, 32.6 per cent were Catholic, and 1 per cent were Jewish. Sixty-eight per cent of the children lived in the country and over 31 per cent in cities.

In 1864 the population of Prussia was 19,226,270, of whom 17.9 per cent were children of school age, in actual figures, 3,457,301. In that year there were but 2,938,679 children in public elementary schools, leaving 518,622 children who attended private schools, the higher schools, schools for orphans, or who were not in school at all. About 15,500 were not regularly enrolled. Thirteen per cent of the children spoke Polish.

The following table indicates the range of salaries paid. In addition to the cash salary received, the city teachers had free lodgings and the rural teachers received food and fuel.

SALARY	POSITIONS	SALARY	POSITIONS
1. 50-100 Thalers . .	1926	9. 350-400 Thalers . .	1415
2. 100-125 Thalers . .	3673	10. 400-450 Thalers . .	795
3. 125-150 Thalers . .	4688	11. 450-500 Thalers . .	492
4. 150-180 Thalers . .	6536	12. 500-550 Thalers . .	321
5. 180-200 Thalers . .	3754	13. 550-600 Thalers . .	174
6. 200-250 Thalers . .	6197	14. 600-650 Thalers . .	96
7. 250-300 Thalers . .	3745	15. 650-700 Thalers . .	53
8. 300-350 Thalers . .	2256	16. Over 700 . . .	172

One receives another view of conditions in Prussia forty-five years ago by a comparison of the illiterates among the army recruits in 1871 and in 1906.<sup>1</sup>

<sup>1</sup> Zentralblätter, 1873 and 1907.

PROVINCE	PERCENTAGE OF ILLITERACY	
	1871	1906
Prussia { East Prussia . . . . .	9.28%	0.05%
West Prussia . . . . .		0.04%
Brandenburg . . . . .	0.65%	0.01%
Pomerania . . . . .	1.16%	0.02%
Posen . . . . .	15.59%	0.06%
Silesia . . . . .	3.34%	0.02%
Saxony . . . . .	0.55%	0.03%
Schleswig-Holstein . . . . .	0.72%	0.00%
Hannover . . . . .	0.40%	0.01%
Westphalia . . . . .	1.33%	0.01%
Hesse Nassau . . . . .	0.53%	0.05%
Rhine Province . . . . .	0.80%	0.00%
Kingdom . . . . .	3.42%	0.02%

In conclusion of the historical outline we give a translation of the General Regulations of 1872, not only because they form the basis of the present-day organization of the *Volksschulen*,<sup>1</sup> but also because they reflect the educational progress in the nineteenth century up to that date.

1. The normal types of *Volksschulen* are (a) the fully graded school, (b) the partially graded school, and (c) the ungraded (one-class) school with one teacher only, who may divide the pupils to attend half-day schools.

2. In the one-class *Volksschule*, containing children of the years of compulsory age, the pupils are taught in one and the same room by one teacher. The number of children must not exceed eighty. The pupils of the lower section are to receive twenty hours of instruction a week, but thirty hours will be given in the middle and upper sections, including gymnastics for boys and handwork for girls.

3. *Half-day Schools*. — Where the number of pupils rises above eighty, or where the schoolroom is not sufficiently large for even a less number and the appointment of a second teacher is not immediately possible, as

<sup>1</sup> Von Bremen, p. 644 ff.

well as where other circumstances make it necessary, the organization of half-day schools may be resorted to with the sanction of the authorities. There shall be given thirty-two hours' instruction to both classes per week, or sixteen to each.

4. *Schools for Two Teachers.* — If two teachers are engaged at a school, the children are separated into two rooms. If the number of pupils rises above 120, the opening of a third room is required; the lowest grade will then have twelve hours' instruction per week, the middle twenty-four, and the highest twenty-eight hours.

5. *Graded Schools.* — In schools of four or more grades the children of the lower grades are to receive twenty-two, the middle twenty-eight, and the upper grade between thirty and thirty-two hours' instruction per week.

6. *Separation of the Sexes in the School.* — In graded schools of more than four grades it is desirable to separate the children according to sex in the upper grades, but in schools of only two teachers the arrangement of ascending grades without regard to sex is preferable.

7. If in any school district several one-class or ungraded schools exist, a consolidation into a central union school is strongly recommended.

8. *Arrangement and Equipment of Schoolrooms.* — The schoolrooms must be large enough to give each child an area of 0.6 square meter. Care should be taken to make the room light and airy, that it have good ventilation, give protection against bad weather, and be well provided with window shades. Desks and seats should be in sufficient number, and so placed and arranged that all the children in the room may sit and work without detriment to their health. The desks should be provided with inkwells. To the proper equipment belongs also a sufficient number of hooks for cloaks, coats, and caps, etc.; also a blackboard on an easel, a wall blackboard, a platform with desk that may be locked, a cupboard for storing books, copy books, crayon, sponge, etc.

9. *Necessary Appliances.* — For complete instruction there are required: (1) A copy of each text-book and exercise book introduced in the school (for the teacher's desk); (2) a globe; (3) a wall map of the home province or state; (4) a wall map of Germany; (5) a wall map of Palestine; (6) some pictorial representations of geographical scenery; (7) alphabets in large, bold type pasted on wood slides or pasteboard for use in the primer class; (8) a violin; (9) large ruler and compasses for use on blackboards; (10) an abacus. In Protestant schools there is to be added (11) a Bible and (12) a copy of the hymnal used in the parish church.



For schools of more than one grade these appliances are to be multiplied adequately.

10. *Lists and Registers.* — The teacher is required to keep the following books and registers: (1) a book devoted to school chronicles; (2) a list of pupils, their addresses, etc.; (3) a book of progress, showing the subject-matter taught each day; and (4) a list of attendance, punctuality, etc. The teacher is further required to have at hand always the course of study prescribed, a time-table, and the distribution of subject-matter of instruction for each term.

11. *Text-books and Exercise Books.* — The appliances required of the pupil in ungraded schools or schools of two teachers are: (*a*) books, to wit, a primer or a reader, a book of problems for arithmetic, a song book, and the books required for instruction in religion; (*b*) exercise books, to wit, a diary, a copy book for penmanship, a blank book for spelling and composition, a drawing book in the upper grades; (*c*) other appliances, to wit, a slate with pencil and sponge, a ruler, and compasses.

Pupils of graded schools may be required to provide themselves with brief guides for nature study and other realistic branches, also with a copy of the reader arranged for ascending grades, as well as with an atlas. For each separate study an exercise book is to be procured.

12. *Grading of the People's School.* — The school, even the one-class school, is divided into three sections or grades in accordance with the age of the pupils and their degree of progress. In a school of four classes the middle section is represented by two classes. In schools of six classes each section has two classes.

13. *Subjects of Study in the People's School.* — The subjects to be taught are: Religion, German language (speaking, reading, writing), arithmetic and the elements of geometry, drawing, history, geography, nature study, gymnastics for the boys, female handwork for the girls.

The hours of instruction in ungraded schools for the separate subjects are as follows :

	LOWER SECTION	MIDDLE SECTION	UPPER SECTION
	Hours	Hours	Hours
Religion . . . . .	4	5	5
German language <sup>1</sup> . . . . .	11	10	8
Arithmetic, geometry . . . . .	4	4	5
Drawing . . . . .	—	1	2
Realistic Studies <sup>2</sup> . . . . .	—	6	6
Singing . . . . .	1	2	2
Gymnastics — Female Handwork . . . . .	—	2	2
Total . . . . .	20	30	30

In the graded schools, the distribution is as follows :

	LOWER SECTION	MIDDLE SECTION	UPPER SECTION
	Hours	Hours	Hours
Religion . . . . .	4	4	4
German language <sup>1</sup> . . . . .	11	8	8
Arithmetic . . . . .	4	4	4
Geometry . . . . .	—	—	2
Drawing . . . . .	—	2	2
Realistic studies . . . . .	—	6	6 (8)
Singing . . . . .	1	2	2
Gymnastics, Girls' Handwork . . . . .	2	2	2
Total . . . . .	22	28	30 (32)

In half-day schools and in schools of two teachers with three grades, changes in the foregoing time-table may be made in accordance with local circumstances.

<sup>1</sup> German language includes reading, writing, spelling, grammar, composition, and literature.

<sup>2</sup> Realistic studies include geography, history, elements of natural history, and natural science.

NOTE. — Paragraphs 14, 15, 16, 17, 18, 19, 20, and 21 refer to matter and method of religious instruction. The subject is divided into sacred history, Bible reading, church calendar, catechism, hymns and prayers. Then follow the rules governing the other branches of study.

22. *German Language*. — Instruction in German includes all exercises in speaking, reading, and writing. The latter includes penmanship, spelling, grammar, composition, and literature. These subjects must in all grades remain in organic connection (*i.e.* be correlated) and as far as is possible progress in uniform steps.

23. *Practice in Oral Expression*. — Practice in oral expression requires no separate instruction. It prepares the way for instruction in writing and reading, and accompanies it in its further development.

The simplest and best-known objects form the material in the lower division, the pictures in the middle, and the reading book in the upper division.

Its formal aim is, in gradual progression, to enable the pupil to pronounce correctly and clearly each single word and to give free expression to his thoughts in a simple sentence, the power of sure and correct expression in compound sentences, avoiding the most common mistakes in forms of words and formation of sentences, and lastly, the ability to reproduce freely and correctly imparted knowledge and to arrange and clearly state his own thoughts.

24. *Instruction in Writing and Reading*. — Instruction in writing and reading is to be according to the method in use in the normal school in the district. The spelling method of learning the letters is forbidden.

The aim is, in the lower division, to enable the children to read correctly connected reading pieces and not only to copy, but also to write for themselves short sentences; in the middle division, to read whole reading pieces, in prose and verse, in Latin and German characters, without stumbling and intelligently, to write correctly a simple dictation, and to reproduce unaided a reading piece of simple form and content. In the upper division the pupils are to be led to read at sight easily and with expression more difficult reading pieces, of which the content is not too remote from the circle of their ideas, to write dictations of this kind without a mistake, and to reproduce correctly longer reading selections.

Special hours are to be assigned for penmanship in the middle and upper divisions of a school with one or two teachers and in the middle classes of larger schools; in the upper classes of such schools it can take

the form of home work. The aim of the instruction is the acquirement of a neat, clear, graceful handwriting in all work, even to that quickly written.

The results of a good instruction should be plainly visible in the pupils' notebooks.

To be recommended as context of the copies are popular proverbs and good and appropriate samples of business letters and forms.

25. *Instruction in German Grammar.* — In the upper classes of schools with several classes special hours are assigned to instruction and practice in German grammar; in the schools with one or two teachers it is combined with the rest of the language instruction.

The aim of the instruction for the middle grades is a knowledge of the simple sentence and the simplest rules of etymology; for the upper division, the compound sentence and more thorough instruction in accidence and formation of words.

26. *The Reading Book.* — The groundwork of all instruction in German is the reading book. Where possible, the whole book is to be worked through. The reading book is not only to further the attainment of skill in reading, but also to lead to the understanding of the contents of the piece. The pieces are so to be selected that about thirty are treated in a year.

Suitable poetical pieces (in small schools particularly the texts of songs) are to be committed to memory in all three divisions after they have been commented on.

In the upper classes of larger schools the reading book is to be used to give the children examples of the chief works of patriotic (popular) poetry, and some information about the national poets, but only those since the Reformation.

The selection of the reading book to be introduced is to be made from those which have a popular character and which by the whole of their contents promote the educative purpose of the school. And among these those deserve the preference which are correct in form, and in the historical and scientific selections are not the original productions of the editors, but specimens from the best popular works of the great writers in those branches and which are free from all political and religious bias. For schools attended by children of different denominations, as far as possible, only those reading books are to be chosen which have really no denominational character. In books already in use the pieces denominational in character are to be assigned to the religious instruction.

27. *Language Instruction in Schools Attended by Children of Different Nationalities.* — With regard to the schools in which the children, or some of them, speak another language than German, the special regulations issued in the past or to be issued in the future are to be put in force.

28. *Instruction in Arithmetic.* — In the lower divisions operations with concrete and abstract numbers between one and one hundred are learned and practiced; in the middle division, the same operations with unlimited numbers, also problems in averages, reduction, and the simple rule of three; the arithmetic for the upper division includes fractions (for which suitable preparation must be made in the other divisions), their application to calculations of everyday life, and a thorough treatment of decimal fractions.

In the larger schools this amount is extended in these everyday calculations to problems of a harder kind, in decimals to the extraction of square root.

In the lower division, in schools with only one or two teachers, as far as possible, in other schools regularly, all calculations are to be done mentally. At the beginning of a new rule in all divisions, mental calculations precede those on the board. In practical applications the relation to everyday life is always to be kept in view; consequently examples with large and many-figured numbers are to be avoided, and the problems made to correspond to the actual conditions of things.

By means of these problems the pupils are to be made acquainted with the existing system of weights, measures, and coinage.

Arithmetic is to be regarded in all divisions as practice in clear thinking and correct speaking. Still, the ultimate aim is to enable the pupils to solve unaided, surely and quickly, the problems set them.

In all schools the instruction is to be based on a collection of examples for the pupil, to which the teacher has the key.

29. *Instruction in Geometry.* — The set portion of geometry includes the line (straight, equal, unequal, parallel), the angle and its kinds, triangles, quadrilateral, regular figures, the circle and its aiding lines, and the regular solids.

In larger schools lines and angles are more fully treated, and, in addition, the equality and similarity of figures in elementary treatment.

Instruction in geometry is to be connected with both arithmetic and drawing. While in the latter the pupils learn to correctly observe and represent the forms of lines, surfaces, and solids, in the former they learn to operate certainly and intelligently with their measurements, to cal-

culate the length of lines, the extent of surfaces, and the volume of solids.

30. *Drawing*. — In instruction in drawing all children are to be occupied simultaneously and similarly, and by constant practice of hand and eye are to be so trained that they are able, with the help of ruler, scale, and compasses, to copy pattern figures on a given reduced or magnified scale and to represent geometrical views of objects of simple shape on a given scale, — *i.e.* the furniture of the room, garden surfaces, houses, churches, and other solids which present straight edges and large surfaces.

Where this end is attained, specially gifted children may be set to draw from copies.

A special regulation is issued as to drawing in larger schools.

31. *Instruction in Realien*.<sup>1</sup> — In the instruction in the *Realien* the reading book is to be used to give life, completeness, and repetition in the material which the teacher, after careful preparation, presents orally and through direct observation. In larger schools special text-books may be used as well. No use is to be made of dictations; forbidden, too, is the purely mechanical committal to memory of dates, lists of kings and queens, names of countries and towns, numbers of inhabitants, names and characteristics of plants, numbers of size and relations in natural science. In geography and nature study the instruction begins with observation, which in geography is attained by means of the globe and map; in the descriptive sciences, by samples of the objects to be discussed or by good illustrations; in natural science (physics), at least in the larger schools, by experiment.

Throughout, even in larger schools, the material is to be gradually extended, proceeding from the easier to the more difficult, from the nearer to the remote.

32. *History*. — From the earlier German history, and from the earlier history of Brandenburg, certain biographies are to be selected; from the time of the Thirty Years' War and the Great Elector the chain of such biographies is to be continued unbroken. So far as the children are able to grasp it, the chief features of the progress in civilization are also to be dealt with.

The fullness and the number of the biographies is determined by the

<sup>1</sup> By *Realien* are meant the branches which convey knowledge of real things — actual knowledge, not merely the form of knowledge.

character of the school and the amount of time devoted to this branch of the instruction.

33. *Geography*. — Geographical instruction is to begin with the surroundings of the home and school; it then deals with Germany, and with the outlines of general geography; shape and motion of the earth, causes of day and night and of the seasons, the zones, the five oceans, the five continents, the chief states and cities of the world, the greatest mountains and rivers.

The quantity of the matter will be determined by the character of the school; but in working out a course of studies it is better to limit the extent than to sacrifice the clearness of the instruction and to allow it to degenerate into a mere list of names.

34. *Object Lessons in Natural History, Botany, etc.* — This branch of the instruction includes, besides a description of the structure and life of the human body, that of the native rocks, plants and animals, and of foreign ones, the chief beasts of prey, animals and plants of the East, those cultivated plants of which the products are in daily use in our country (cotton plant, tea plant, coffee tree, sugar cane). Of native objects, those are to be made particularly prominent which arouse special interest (1) through the services which they render to men (e.g. domestic animals, birds, silkworm, corn, spinning plants, fruit trees, salt, coal); (2) through the harm which they do to men (poisonous plants); (3) through the peculiarity of their life or way of living (e.g. butterflies, trichinæ, tapeworm, bee, ant).

In larger schools such objects may not only be increased in number, but also systematically arranged and more exhaustively treated as to their use in industry. Everywhere the aim of the instruction should be to accustom children to an attentive observation and to bring them up to a thoughtful consideration of nature.

35. *Natural Science*. — In this instruction in a school with only one or two teachers the children are to be led to an approximate understanding of those phenomena which daily surround them.

In larger schools this instruction is to be extended to include the most important principles of the equilibrium and movement of bodies, of sound, light, heat, magnetism, and electricity, so that the children are able to explain the commoner natural phenomena and the most frequently used machines.

36. *Singing*. — Hymns are to be practiced alternately with popular songs. The aim should be to secure that each child can sing not only in

chorus, but also alone correctly and surely, and that when he leaves the school he takes with him a sufficient number of hymns and songs (the words of the latter to be perfectly known by heart) as a lasting possession.

37. *Gymnastics*. — This instruction is given in the middle and upper divisions two hours a week, according to the regulation of October 8, 1868. It is desirable that a preliminary course should be instituted in the lower division.

38. *Needlework*. — Needlework should be practiced, where possible, from the middle division upward two hours a week.

The General Regulations of 1872 have reference to all the *Volksschulen*, not merely to the Protestant; the Regulations of 1854 concerned themselves with the ungraded school alone, while those of 1872 considered all types of *Volksschulen*. The General Regulations recognized a division into three sections even in the ungraded school, while the Regulations of 1854 did not. The General Regulations gave definite instructions concerning school equipment, material, and the like. The Regulations of 1854 did not set out the aims of the *Volksschule* clearly as did those of 1872. The General Regulations condemn pure mechanical memorization of material; the Regulations of 1854 demanded a great deal of memorization of religious subject matter. The amount of material in religion was limited by the General Regulations. The sciences, history, and geography come into their own again under the new regulations. And finally the General Regulations emphasized the importance of a national (German) education.

It will be unnecessary to trace further the development of the legal status of the *Volksschule*. We have endeavored to show the nationalistic tendency of the *Volksschule*, that it has been the chief means of unification of German thought and feeling, that subjects and methods of instruction have all been pointed toward a more intense patriotism and national unity.

Comparison  
of the  
Regulations  
of 1854  
and 1872



The present Emperor,<sup>1</sup> in order to combat socialistic principles rampant in Germany, issued the following order; which is, in part:

The history of the Fatherland and particularly the history of social economic legislation and development since the beginning of this (19th) century down to the present social-political legislation, is to be so treated as to show how the Prussian monarchs have always considered their special mission . . . to further the physical and spiritual welfare of their people.

It will not be necessary to treat here the legal development of the Prussian *Volksschule* because the more important newer laws and regulations have been cited in the chapters dealing with the organization of schools, methods, training and payment of teachers, and other topics having to do with the *Volksschulen*.

<sup>1</sup> Lewin, p. 380. *Zentralblatt*, May, 1889.

## CHAPTER II

### ADMINISTRATION OF THE PRUSSIAN SCHOOLS

#### COMPOSITION OF THE PRUSSIAN STATE

*Kingdom*

*Province*

Administrative County

(*Regierungsbezirk*)

District — { City District (*Stadtkreis*)  
(*Kreis*) { County District (*Landkreis*)

Official District

(*Amtsbezirk*)

Community

(*Gemeinde*)

(1) City

(*Städtische Gemeinde*)

(2) Village or town

(*Ländliche Gemeinde*)

(3) Manor

(*Gutsbezirk*)

THE above outline shows the administrative divisions of the Prussian kingdom. The whole kingdom is composed of twelve provinces, the city of Berlin, and the principality of Sigmaringen. Each province is subdivided into administrative counties (*Regierungsbezirke*), usually three or four counties in each province. There are thirty-six such counties in the entire kingdom. The head of the provincial government is the first president of the province (*Oberpräsident*), while the highest official in the administrative county is county president (*Regierungspräsident*).

Each administrative county is divided into districts (*Kreise*), either city districts (*Stadtkreise*) or country districts (*Landkreise*), the mayor and the council being the chief administrative authority in a city district, and the chief magistrate of the district (*Landrat*) being the head of a country district. In a coun-

try district we find a further subdivision — the official district or jurisdiction (*Amtsbezirk*), the administrative officer of which is the district supervisor (*Amtsvorsteher*). This unit of administration has nothing to do with the schools except in matters of compulsory attendance.

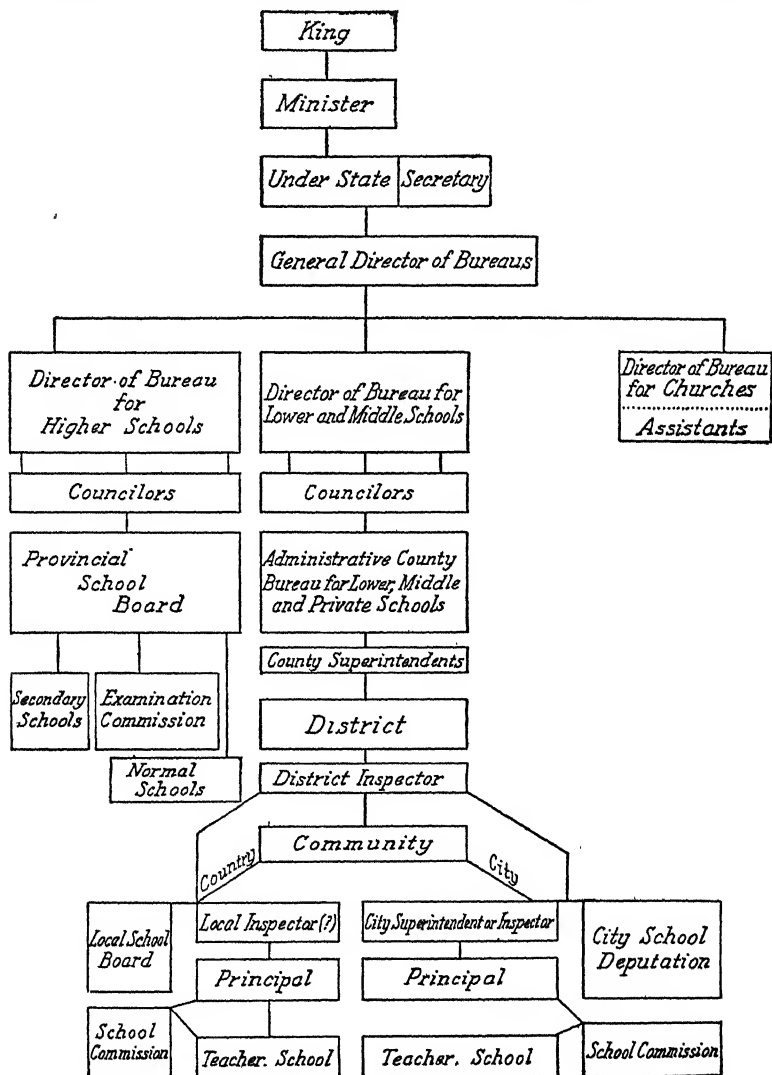
A city district is generally a large city with a few suburbs. It is also at the same time a community. A country district is composed of several communities, which are small cities, villages, and manors. A glance at the diagram on page 54 will make the matter clear.

This brief résumé of the political organization of Prussia is given in order to make the explanation of the administration of the *Volksschulen* a little more clear, because for almost every governmental unit there is a corresponding school authority. The following diagram (page 56) will aid in reading the text dealing with the administration of the schools.

The Ministry for Religious and Educational Affairs (*Ministerium für geistlichen-und-Unterrichtsangelegenheiten*) is the highest administrative authority of the Prussian school system. This ministry had its origin in 1787 <sup>Ministry</sup> in the *Oberschulkollegium*, which was dissolved in the reorganization of the Prussian state after the Peace of Tilsit. In 1810 (*Verordnung* of October 27, 1810, Von Bremen, p. 45) a special bureau for ecclesiastical affairs and public instruction was created under the Ministry of the Interior and all institutions of culture and learning were assigned to this bureau. In 1817, however, Frederick William III removed this department from the control of the Ministry of the Interior, and created a new portfolio, known as the Ministry for Religious, Educational, and Medical Affairs (*Ministerium für geistlichen-Unterrichts-und-Medizinalangelegenheiten*). The ministry was known by this name until 1911,<sup>1</sup> when the section controlling medical

<sup>1</sup> *Zentralblatt*, 1911, p. 301 ff.

DIAGRAM OF SUPERVISORY OFFICERS IN PRUSSIAN ELEMENTARY SCHOOLS



affairs was withdrawn and the ministry is now the *Ministerium für geistlichen und Unterrichtsangelegenheiten*.

The ministry regulates the school system and church affairs for the whole kingdom, issues regulations, prepares laws, and receives reports and statistics dealing with school affairs. It has the deciding voice in all questions which concern the schools, if such questions cannot be settled by some lower authority.

General  
Work of the  
Ministry

The Minister as the educational head is responsible to the king and to the lower legislative house in Prussia. The occupant of this office may or may not be a school man, for the office is political in character. Among the duties of the Minister, although in reality the work is done by secretaries, are the following: determination of the outward form of the schools; making of courses of study and curricula; examinations for higher schools; final approval of text-books; appointment of normal school teachers, principals and teachers of preparatory schools for normal training schools (*Präparandenanstalten*), and district school inspectors; reappointment of discharged teachers or teachers who have been suspended; appointment of foreign exchange teachers; and the approval of extraordinarily long leaves of absence.

Duties of  
the  
Minister

Next to the Minister is an under state secretary. Below this secretary are the directors of the various bureaus of the ministry and in these bureaus are a number of assistant secretaries (*Vortragende Räte*), whose duty it is to submit to the minister or the directors reports dealing with the special fields assigned to them. From time to time the *Vortragende Räte* visit the schools, but these visits are restricted largely to the higher schools.

Under  
State Sec-  
retary and  
Assistant  
Secretaries

The ministry has three bureaus; namely, a bureau for ecclesiastical affairs, one for higher schools, and one for the lower school system. To the bureau for higher schools are assigned

the affairs of the higher schools, the universities, higher technical schools, and institutions for fine and industrial arts. To the bureau for lower schools belong the *Volksschulen*, the middle schools, normal schools, normal preparatory schools, institutions for the blind, deaf, and dumb, and matters having to do with physical training. The technical school system, with the exception of those mentioned above, and the continuation schools, is in the hands of the minister of commerce and industry. (*Erlass von 3. Sept. 1884, Gesetzsammlung, 1885, p. 95.*)

NOTE. — Since the establishment of a separate ministry of education in Prussia there have been fifteen different ministers including the present one: Freiherr von Altenstein, 1817–1840; Eichhorn, 1840–1848; Graf Schwerin, 1848; von Ladenberg, 1848–1850; von Raumer, 1850–1858; von Bethmann-Hollweg, 1858–1862; von Mühler, 1862–1872; Dr. Falk, 1872–1879; von Puttkammer, 1879–1881; von Gossler, 1881–1891; Graf Zedlitz-Trutzschler, 1891–1892; Dr. Bosse, 1892–1899; Dr. Studt, 1899–1907; Holle, 1907–1909; Trott zu Solz, 1909–1917.

The special bureau for the lower schools was created in 1882. The directors of this bureau since then have been De la Croix, 1882–1889; Dr. Kugler, 1889–1892; Dr. Schwartzkopff, 1892–1909; Von Bremen, 1909–1917.

The Prussian kingdom is divided into twelve provinces with their capitals at Königsberg, Danzig, Posen, Breslau, Stettin, Berlin, Magdeburg, Schleswig, Hannover, Münster, Cassel, and Coblenz. In each province there is a Provincial School Board (*Provinzialschulkollegium*), which has its offices in the provincial capital. The presiding officer of the *Provinzialschulkollegium* is the president of the province (*Oberpräsident*) and is not a school man. He names the members of the examination commissions for rectors of *Volksschulen*, and middle school teachers, interprets salary and pension laws, and at the direction of the Minister decides cases dealing with compulsory pensioning of elementary teachers.

The Provincial School Board is an outgrowth of the *Provinzialkonsistorium*, at first having been a part of the consistory, but finally in 1845 separating entirely from it. Instructions issued in 1817 and in 1825 concerning the duties of the provincial consistories still hold good in the main for the provincial school boards.

The Provincial School Board consists of seven or eight members, although sometimes more. The members are: the president, who is always president of the province; the director, who is sometimes the president of the administrative county (*Regierungsbezirk*, see p. 60) in which the board sits, while at other times there may be another state official or a school man; and six or more members. Among the members (not including the president or director) one finds three or more provincial school superintendents (*Provinzialschulräte*), and several secretaries of the administrative districts, who have also the duties of school superintendent for their respective districts.<sup>1</sup> These six members are all school men. There is another member, the attorney for the board, who is not a school man. Each member has his own particular duties to perform. Inspection of the schools under the control of the board is given over to the provincial school superintendents (*Provinzialschulräte*). These superintendents are always school men, and, as a rule, have been directors of some form of secondary schools. Decisions are made by the board as a whole and are never left to a single member. Papers and letters coming to the board are recorded by number in a journal, and their disposal is also noted in the same book. If such documents are reports which are intended only for the authorities, then they simply go into the records, but in all other cases a written answer is given. This answer is copied

Duties of  
the Provin-  
cial School  
Board

<sup>1</sup> This latter group of members have the title of *Regierungs- und Schulrat*. See p. 61.

and filed, while the original is signed by the office and sent out. All records are carefully arranged and preserved in the registrar's office.

The Provincial School Board has control of the higher schools (*Gymnasien, Realgymnasien, Oberrealschulen, und höhere Mädchenschulen*), normal schools, normal preparatory schools, and the examination commissions for these schools. Likewise the institutions for the deaf, dumb, and blind are under the supervision of this board. New courses of study and material can be introduced only with its consent.

In Prussia there are higher schools which are supported entirely by the state, others which are maintained by the cities, and still others founded by the cities, but aided by the state. The Provincial School Board controls all the affairs, both financial and educational, of the first type of school. In the second type the financial matters are controlled and the teachers are appointed by the city from the official lists. Such appointments, however, must be approved by the Provincial School Boards. In schools supported entirely by the state there is no intermediary officer between the director of the school and the Board.

This is, briefly, the form of the Provincial School Board. It has little or nothing to do with the elementary schools, except that the normal schools which prepare teachers for the *Volkschulen* are under its supervision.

Each province of the Prussian kingdom is divided for administrative purposes into administrative counties (*Regierungsbezirke*). Such units correspond in a way to our counties, but the comparison is not very close. The county is the unit of administration for the lower schools in the province, each province being divided into several administrative counties. For example, the province of Pomerania is divided into three counties; namely, Stettin, Köslin, and Stralsund. The county government has usually three

Adminis-  
trative  
County



bureaus: a bureau for the administration of internal affairs (*Präsidial Abteilung*); a bureau for churches and schools (*Abteilung für Kirchen- und Schulwesen*); and a bureau for taxes, lands and forests (*Abteilung für Steuern, Domänen, und Försten*). The bureau for churches and schools has control of the *Volks-schulen*, the middle schools, and the private schools.<sup>1</sup> It is composed of seven or eight members, some of them being administrative officials, and others being school men, each with the title of *Regierungs- und Schulrat*, county superintendent for schools. It is the duty of these superintendents to visit the schools and exercise general supervision over them.

Instructions issued in 1817 and in 1825 concerning the powers and duties of the administrative county in school matters hold good to-day, although some slight changes have been made and its duties have been somewhat increased by more recent laws. These duties are in part as follows:

Powers and  
Duties of  
the County  
Govern-  
ment

1. Approval of appointment of teachers in the elementary schools which have been made by municipalities, school deputations, or any other lower authority.<sup>2</sup>
2. Granting leaves of absence to the extent of six months or more.
3. General supervision of public school property, and also the property of private foundations.
4. Supervision of official acts of teachers; also the conduct of teachers outside of school hours.
5. Supervision and administration of the whole elementary school system, including the middle and private schools.
6. Supervision of all financial affairs of institutions under its control.
7. Visitation of local school authorities and inspection of their offices; likewise the county superintendents (*Regierungsschulräte*) must visit the school assigned to them and make reports thereon. Such visits, of course, cannot be very frequent in a single school, owing to the large number of institutions assigned to the supervision of one man.

<sup>1</sup> In Berlin the lower schools are under the supervision of the Provincial School Board of the province of Brandenburg.

<sup>2</sup> See p. 171 for the method of appointment of teachers.

8. Introduction of new text-books and courses of study.
9. Determination of vacations.
10. Instructions to principals and head teachers.
11. Approval of any fundamental changes in the organization of the school systems under its control.
12. Introduction or changes in salary schedules.<sup>1</sup>

In short, the county government is the representative of the royal ministry in the several administrative counties, the bureau for churches and schools being responsible to the Berlin authorities when the lower school system is concerned. Under the administrative county (*Regierung*) are the following authorities:

1. Each administrative county (*Regierungsbezirk*) is divided into a number of smaller districts, each of which is known as a *Kreis*. These *Kreise*, when referred to as a part of the school system, are called school inspection districts (*Schulaufsichtsbezirke*), and the term will be used in this sense. An administrative county is generally divided into twelve inspection districts (*Kreise*). These districts are separated into two groups and each group is placed under the general supervision of a county school superintendent (*Regierungs- und Schulrat*). For example, the administrative county Köslin, in the province of Pomerania, is divided into twelve districts (*Kreise*). The districts Köslin, Colberg, Stolp, Lauenberg, Shaue, and Rummelsburg are under one county school superintendent (*Regierungsschulrat*), while the other six districts of the county are under another superintendent.<sup>2</sup> The real inspection of the schools is in the hands of the "district school inspector" (*Kreissschulinspektor*). This inspector must be carefully distinguished from the *Regierungsschulrat* or county school superintendent. The latter has the general supervision of several school inspection districts (*Kreise*), while the former has the administration

<sup>1</sup> Von Bremen, *Das Schulunterhaltungsgesetz*, p. 139.

<sup>2</sup> See p. 56 for the diagram for school supervision.

and inspection in one or part of one inspection district. There are two types of inspection districts, the country inspection district (*Landkreis*) and the city inspection district (*Stadtkreis*). In a city inspection district there is more than one district school inspector, since as a rule such an inspection district is further subdivided into smaller inspection units, each of which has its own district school inspector (*Kreisschulinspektor*). To make the matter perfectly clear, let us take an example. In the province of Pomerania, administrative county of Köslin (*Regierungsbezirk*), in the inspection district Köslin (*Kreis*) there are five inspection units, Köslin I, Köslin II, Köslin III, Köslin IV, Köslin V, each of which stands under the supervision of a district school inspector (*Kreisschulinspektor*). In each inspection unit within a district, if the latter be subdivided at all, there are a number of estates, villages, towns, and perhaps a city.

The district school inspector is the superior of local school boards, school deputations, local inspectors, principals of schools, and teachers within the district, or that part of it assigned to him. He exercises supervision over the teaching personnel and school attendance; appoints teachers to fill unexpected vacancies; grants to teachers within his district leaves of absence for anything less than fifteen days; may inflict fines up to nine marks; and may warn teachers who in any way neglect their duties. He must make a report to the *Regierung* of his visits to the schools. It is his further duty to see that the laws and orders issued by the higher authorities are carried out. The inspector is also required to visit and inspect the schools of his district, to keep the schools supplied with materials so far as he can do so in accordance with the existing regulations, and where this is not possible he makes recommendations to or requisitions upon the higher authorities. Among the special duties of the district school inspector are the following :

Duties  
of the  
*Kreisschul-  
inspektor*

1. The technical direction and inspection of the work in the schools.
2. The final fixation of courses of study and schedules.
3. The holding of conferences with teachers and principals.
4. The holding of school examinations.<sup>1</sup>

NOTE. — The following are the instructions for the *Kreisschulinspektor* in the *Regierungsbezirk Arnsberg*. (Sachse: p. 5. *Verordnungen betreffend das Schulwesen im Regierungsbezirk Arnsberg*, 1910.)

Instructions for District School In- spectors	1. The district school inspector exercises the school supervision of his district. . . .
	2. The official activity of the inspector covers all public and private schools or institutions of learning, which come under the authority of the county.

3. The duty of the inspector consists not only of the inspection and care of the schools placed under his charge, but also of the supervision and support of teachers in such schools. He is permitted to grant leaves of absence up to two weeks in cases of necessity. . . .

4. Above all it is his duty to work actively for the betterment of the schools hand in hand with the local school boards whose next superior he is in the internal affairs of the school.

5. For this purpose he, in company with the local board, must inspect each school of his district at least once a year and conduct a thorough examination of its work.

6. His supervision covers the whole field of instruction and education in the school, especially with reference to the conduct, attitude, ability, and results of the teacher, to the general and special methods employed, to the carrying out of the prescribed course of study and schedules, to school materials, to the position and progress of each class and section, to the behavior and discipline of pupils, and to school attendance; in short, he must give attention to the regard paid to all regulations pertaining to the elementary schools.

7. The inspector must also take note of the external affairs of the school, the building and its equipment, and the dwelling and salary of the teacher, although such externals lie under the supervision of the chief magistrate of the district (*Landrat*), or other civil authorities.

<sup>1</sup> *Dritte Anweisung zur Ausführung des Schulunterhaltungsgesetz vom 28 Juli, 1906*, (G. S. p. 335), and *Zentralblatt*, 1907, p. 128.

8. By means of instruction and advice he must immediately take steps to correct the errors and deficiencies which he has noted. In suitable cases he must call the attention of the local school board thereto. It is also his duty to remove as quickly as possible all difficulties which may exist among teachers, school boards, and other parties, and, if necessary, to make a report of the matter.

9. The inspector must also see that the religious instruction is imparted according to plan and is required to make note of the content of such instruction.

10. It is his duty to appeal to the chief magistrate of the district for interference in cases where he (the inspector) has not been able to eliminate irregularities by communication with the local authorities. This applies especially to irregularities in school attendance.

11. Before the first of November every year the inspector must make a report upon the condition of the schools in his district. . . .

12. The inspector is required to advance the further practical and theoretical training of his teachers. He organizes and conducts teachers' meetings, and supervises teachers' libraries and reading circles. . . .

13. It is his especial duty to concern himself with the normal preparatory schools of his district, in so far as this supervision is not otherwise provided for. . . .

14. He supervises teaching candidates before their appointment, gives notices of vacancies, makes proposals as to appointments, and must look out for supply teachers in cases of temporary suspension of school work.

15. He forwards to the administrative bureau proposals, requests, and reports of teachers and school boards, which he himself cannot dispose of. . . .

16. The inspector must keep a journal for all incoming documents and must make a record of their contents, date, and disposal. In addition he keeps a general record, a special record for each school, a personal record for each teacher, a record of teaching candidates, and a record of pupils in the normal preparatory schools.

With reference to the external affairs of the school, the inspector goes to the chief magistrate (*Landrat*) of the district. (See page 67.) The local school inspectors are under the supervision of the district inspector, from whom they receive instructions, and to whom they make reports.

The district inspector is appointed by the ministry. Men are chosen for this office who have had professional and academic training, preferably men who have been teachers in normal schools or principals of large *Volksschulen* or middle schools. The office of district inspector is not, however, always filled by a professional man who can devote all of his time to this one position. In most cases the office is held as a part-time position, and, in a large majority of cases, the office is occupied by a clergyman. In large cities the duties of the district inspector are often attached to those of the city school inspector, who is an official of the city, or to those of the city school superintendent (*Stadtschulrat*); in country districts a clergyman performs the duties of this office in addition to his own ecclesiastical obligations. This situation in rural communities is greatly deplored by German school men, whose ideal it is to have all such positions filled by trained men who can give their entire time to this work.

The following table will serve to show how many inspectorships are held as part- and full-time positions.

PART AND FULL-TIME INSPECTORS IN GERMANY

YEAR	PART-TIME	PER CENT	FULL-TIME	PER CENT
1901	918	74.5	311	25.5
1902	914	74.3	316	25.7
1904	936	74.4	316	25.6
1907	941	72.4	331	27.6
1910	901	71.2	363	28.8
1912	827	67.8	392	32.2

It will be seen that the total number of inspectorships has decreased; but this does not mean that the amount of inspection is any less, for while the part-time inspectorships fell off 91, the full-time inspectorships increased 81, and there is little

doubt that 81 full-time inspectors can accomplish more than 91 part-time men.

There are several reasons why the teachers want inspection by trained men. First, of course, because a professional man is a better inspector, other things being equal; second, because, if the inspectorships are taken out of the hands of the clergy, a large number of positions affording promotion are opened up to the common teacher. The question of supervision by the clergy is discussed in another place. (See p. 68.)

The salary of the district school inspector is regulated according to the length of service. The minimum salary is 3000 M., while the maximum is 6000 M., the highest salary being reached after twenty-one years of service. An allowance is also furnished for expenses incurred in performing the duties of office.

Salary of  
the In-  
spector

2. The *Landrat* or chief magistrate of the district (*Kreis*) as an official of the *Regierung* has also the right to visit and inspect the schools. He is not, however, concerned with the internal affairs of the schools, but only with external affairs, buildings, grounds, etc. In case he has suggestions to make, he confers with the district school inspector. The *Landrat* has no disciplinary authority over the teachers.<sup>1</sup>

*Landrat*

3. The *Ortsschulinspektor*, or the local school inspector, is the next superior above head teachers or principals (*Rektoren*) and ordinary teachers. The local inspector has the supervision of a few schools only, sometimes those of several small communities, sometimes of a single community (*Gemeinde*) which contains only one school. His inspection district is confined to the limits of the parish or civil community, or to several communities, in case they are united to form a union school district. (See p. 69.) This

*Ortsschul-  
inspektor  
or Local  
Inspector*

<sup>1</sup> *Min. Erl.* of June 12, 1847, and July 27, 1874.

office in small places and in the country is held by a clergyman as an incidental office, or by the principal (*Rektor*) of a school. Sometimes, however, the duties of the local inspector are given over to the district school inspector, or, if the school has six or more grades, the principal exercises the duties of the local inspector and is then directly responsible to the district inspector as next higher official. Thus, in a city, a *Volksschule* would be administered by a principal, who, although he has no such title, is the local inspector of his school, the next higher supervisor being the district school inspector, on the part of the state, and the city superintendent (*Stadtschulrat*) on the part of the city, which two offices are generally filled by one man. As a rule, however, the local inspectors in small towns and in the country are clergymen.

It seems strange to us in America to have school inspection exercised by the clergy, but it arises from the fact that in early times the clergy were the only teachers in Germany; indeed, the privilege to teach had to be granted by the church. As the two professions became more and more distinct, the clergy withdrew from the office of teaching, but retained their hold upon schools, by reserving to themselves the right of supervision and inspection. It was only natural that the clergy should become the local inspectors, for they were the most highly educated persons in the community, and they have continued so until to-day. Teachers had to have some sort of local supervision, and consequently this work was intrusted to the clergy. The tendency now is to take the schools more and more from the control or influence of the church and have all the supervising officers appointed from the trained teaching profession. It will be a long time, however, before an entire removal of the clergy from the schools takes place in the country. In the large cities of Germany the clergy have nothing to do with the schools except to exercise a sort of supervision over the content and



methods in the courses in religion given in the various types of educational institutions.

The duties of the local inspector are as follows: Duties of  
the Local  
Inspector

1. To supervise instruction as to method and subject matter.
2. To see that the right division of time is made among the different subjects.
3. To inspect and control the condition of the school buildings, rooms, premises, and apparatus.
4. To know the official and private life of his teachers.
5. To suspend instruction in cases of necessity.
6. To grant leaves of absence up to three days.
7. To take part in the meetings of the local school board.
8. To make report of his work to the district school inspector.

The local school inspector is appointed by the administrative county (*Regierung*).

A community (*Gemeinde*), either city or rural, forms a school corporation (*Schulverband*); that is, the community, when acting in the capacity of school corporation, is a (*Schulverband*) school corporation, union, or society. Several towns, villages, or manors may unite to form a union school corporation or society, while generally a city (*Stadtgemeinde*) forms a school corporation of its own. The business of this corporation is to furnish funds for the support of the schools and to administer these funds. The local civil authorities, the mayor, town or city council, are the representatives of the *Schulverband*; just as in America the city or town authorities may control school property and levy taxes. Schulver-  
band or  
School  
Society <sup>1</sup>

In cities the administration and the inspection of all elementary school affairs, except those rights belonging to the school corporation or community, are intrusted to a school deputation (*Schuldeputation*).<sup>2</sup> This deputation is re- School  
Deputation

<sup>1</sup> Gesetz betreffend die Unterhaltung der öffentlichen Volksschulen vom 28 Juli, 1906.

<sup>2</sup> Schulunterhaltungsgesetz vom 28 Juli, 1906; Anweisung für Ausführung dieses Gesetzes vom 6 November, 1907.

sponsible to the local city government, and to the district school inspector, who as the representative of the administrative county (*Regierung*), has a seat in this body.

The deputation has not the same number of members in all cities. The law of 1906 says that the deputation shall consist of: from one to three members of the administrative or executive branch of the city government; an equal number of members of the city council; at least an equal number of men acquainted with the elementary schools, among which number there shall be at least one rector or teacher of a *Volksschule*; the oldest Evangelical pastor in service, the ranking Catholic priest, and the rabbi, if there are twenty Jewish school children. The community may increase these numbers with the approval of the higher authorities. The length of term is six years. The members of the deputation coming from the executive branch of the city government are appointed by the mayor; the members from the council are elected by the council; the members from the teaching body are elected by the members of the deputation already chosen. All members must be approved by the *Regierung*.

Duties of  
the School  
Deputation

The school deputation has generally the following duties: <sup>1</sup>

1. To supervise all matters internal and external, which concern the lower schools, except the levying of taxes, controlling school funds, exercising of property rights, etc., which are reserved to the city authorities.
2. To see that the laws concerning schools are enforced.
3. To see that the teachers perform their duties faithfully and well.
4. To enforce the attendance laws.
5. To see that an ample number of schools are available, and that they are kept in good condition.
6. To grant leaves of absence from fourteen days to six months in length.
7. To create new classes, teaching positions, and schools, as far as available funds permit.

<sup>1</sup> *Dortmunder Bürgerbuch*, 1912.

8. To grant teachers permission to assume outside offices or duties outside.

9. To assign teachers to various schools.

10. To fix school precincts so that each school may have its correct quota of children.

11. To draw up the yearly school budget before the city council.

12. To administer the income and expenses within the limits of the budget as approved and to render accounts thereof to the city authorities.

13. To propose candidates for teaching positions to the *Regierung* for approval.

14. To decide questions dealing with children who desire to leave school before the end of the compulsory period.

15. To buy teaching material, and apparatus; to locate new school buildings; and to vote repairs and new schools.

These duties and rights are given to the school deputations by the *Regierung* and their decisions *require* its approval unless the *Regierung* places such duties without reserve in the hands of the deputation.

The representative of the school deputation who visits the schools, inspects the class work, and supervises the *interna* of the school is the city school inspector or superintendent (*Stadtschulrat*), who also very frequently exercises City School  
Inspector the duties of district school inspector for the *Regierung*. The local school inspector is not found in large cities, his duties being assumed by the principals of the schools or by the city inspector. The city superintendent (*Stadtschulrat*) is generally a member of the school deputation. In smaller cities there is no city superintendent, and in such cases his duties belong then either to the district school inspector or to the local inspector (*Ortsschulinspektor*). In Stettin, a city of a quarter of a million people, there are two city school superintendents, the one supervising the upper schools, and the other the middle schools and a few of the *Volksschulen*, the latter exercising the duties of a district school inspector, and responsible both to the city and to

the *Regierung*. The remainder of the *Volksschulen* of Stettin are supervised by a district school inspector, though his duties are very similar to those of the city superintendent in this case.

In cities, school commissions may be organized for the *Volksschulen*. That is, for each separate school, or small number of schools, a commission may be established by the city authorities with the approval of the *Regierung* to act as patron for the school. This commission is responsible to the school deputation. It is composed of the mayor or a member of the executive branch of the local government named by the mayor; the local school inspector, if there be one; the local pastor, the rector, or the head teacher of the *Volksschule* concerned; and several members elected from citizens dwelling in the school precinct. The two latter classes of members are chosen by the school deputation.<sup>1</sup>

Although the duties of this commission are not the same in all places, the following are typical:<sup>2</sup>

1. To supervise the discipline and management of the school.
2. To investigate absences from school.
3. To watch over the conduct of the children outside of school.
4. To care for poor children of the school.
5. To effect a close relation between home and school.
6. To make recommendations concerning the school to the school deputation.
7. To carry out the orders which it may receive from the school deputation and the *Regierung*.
8. To manage any special funds belonging to the school.
9. To see that the school or schools are as well equipped as the other schools of the city.
10. To organize school kitchens; to provide cheap meals and summer outings for the children and evenings for parents.
11. To advise the school deputation concerning the course of study.

<sup>1</sup> § 45. *Gesetz betreffend die Unterhaltung der öffentlichen Volksschulen*, 1906.

<sup>2</sup> *Dritte Anweisung für die Ausführung des Schulunterhaltungsgesetzes von 1906*, *Zentralblatt*, 1907.

12. To grant permission to teachers to give private lessons. (This right generally is given by the school deputation.)
13. To attend the examinations of the school.
14. To make recommendations to the school deputation with regard to improvements, repairs, purchase of materials or apparatus.
15. To regulate the use of schoolrooms for religious instruction.

In rural communities, in villages, and in manors, a school board (*Schulvorstand*),<sup>1</sup> represents the community in school affairs. As in the cities, the local government (mayor and town council) votes the money for the schools, exercises the property rights, makes up and approves the yearly budget, and conducts other financial affairs, while the other affairs of the schools, such as supervision and inspection, are in the hands of the local inspector, and of the school board created to support and aid the local inspector. The law<sup>2</sup> reads:

School  
Board or  
*Schulvor-*  
*stand*

In a rural community, which forms a school corporation (see p. 69) of its own, a school board is to be created to administer those affairs of the *Volksschulen* which are not reserved to the local civil authorities.

This school board is composed of:

1. The president of the community.
2. A teacher appointed by the *Regierung*.
3. The Protestant pastor and the Catholic priest oldest in service, and the rabbi.
4. Two to six citizens belonging to the school precincts in the school corporation, that is, the community. These members are elected by the council of the community, and must be approved by the *Regierung*.

The chief duties of the school board are as follows:<sup>3</sup>

1. To administer the funds carried on the budget, the current expenses of the year, and the property set aside for school purposes.

<sup>1</sup> If a country community contains more than ten thousand inhabitants, it may establish a school deputation such as are found in cities, though this is not generally done.

<sup>2</sup> § 47. *Schulunterhaltungsgesetz vom 28 Juli, 1906*. G. S., p. 335.

<sup>3</sup> Von Bremen, *Schulunterhaltungsgesetz*, pp. 225-226.

2. To see that salary schedules are according to law.
3. To provide materials, apparatus, and repairs.
4. To control the organization of the *Volksschulen*.
5. To see that the buildings are heated, ventilated, and cleaned properly.
6. To see that the vacations are begun and closed on the prescribed dates, that the instruction begins and ends promptly, and that the buildings are opened and closed punctually.
7. To establish good relations between the parents and the school.
8. To enforce attendance according to instructions issued by the *Regierung*.

9. To organize lectures, school entertainments, and parents' meetings.
10. To supply school material to poor children, also to furnish them breakfast, shoes, and the like, if necessary.

11. The school board is to be heard so far as local conditions affect the fixing of vacations and hours of instruction. In other matters it is left to the local or district school inspectors to hear the school board where local conditions affect final decisions, in such cases as leave of absence for pupils, early excuse from school attendance, and demotion of pupils.

Thus it is seen that the supervision of the actual teaching is left entirely to the inspectors except in so far as such inspection is intrusted to the principal.

In the *Volksschulen* in large cities or in any elementary school with six or more grades, the head of the school is called *Rektor* (principal), provided he has passed the examination *The Rektor*<sup>1</sup> for this position. The heads of other schools are known simply as head-teachers (*Hauptlehrer*), and as such have little or no supervising authority. Thus, in country schools the principal teacher is called *Hauptlehrer*. The principal very often exercises the rights and duties of the local inspector, as we have said above. The duties of the principals are, in general, as follows:

<sup>1</sup> *Instruktionen von 1811; Erlasse vom 1 Juli, 1889; 25 Juli, 1892; 12 Juli, 1893; 25 Juli, 1894. Dienstabweisung für die Direktoren in Stettin. Zentralblatt, 1894, p. 598 ff.*

1. The principal is the responsible head of his school and the superior of the teachers employed in it.

2. He shall direct the school in its inner and outward affairs, in so far as these are not under the authority of some other official. He shall take care that the general and special regulations concerning school affairs and his school are closely followed out and he shall see that the school fulfills its purpose in respect to education and instruction.

Duties  
of the  
Principal

3. The principal is directly subordinate to the district school inspector. (In this case the district school inspector's duties are exercised frequently by the city school superintendent.) It is the duty of the principal to follow the latter's instructions, and on request to furnish him information about all affairs concerning instruction, organization, discipline, and the conduct of the teachers in and out of school. It is likewise the principal's duty to report to the inspector everything which advances or retards the aims of the school.

4. To report to the inspector the circumstances concerning all inner and outer deficiencies of the school; any cases of neglect or impropriety of teachers inside or outside of their official duties; disregard of regulations dealing with school attendance; all inconveniences which he himself cannot immediately remedy.

5. To hand to the inspector the prescribed lists and reports at definitely fixed periods, particularly,

(a) The outline course of study for the coming year.

(b) A statement concerning the number of pupils in the several classes and concerning the personal condition and income of all teachers employed in the school.

6. The division of instruction among the several teachers rests with the principal, who may consider reasonable requests (as to the work assigned to this or that teacher) in so far as this can be done without any disadvantage to the school. The principal himself has to give at least twelve or fourteen hours' instruction a week.

7. The weekly schedule of hours must be posted by the principal in plenty of time before the beginning of the school year. Copies thereof are presented to the district school inspector and the school deputation. The district school inspector and the school deputation must be immediately informed of any necessary changes in the schedule.

8. The principal must see to it regularly that the classbooks as well as the prescribed reports are properly kept and note this inspection by means of a mark in such books and reports.

9. The principal is allowed, as well as required, to visit the classes of the teachers in order to bring about a uniform process of instruction and discipline in his school, and in order to acquaint himself systematically with the condition of each particular class and with the actual compliance with the course of study and the weekly schedule. On these visits he himself may take charge of the class if necessary to find out what he wishes to know. He may confer with the teachers concerned in regard to his observations, *after the class is over*, but never before the pupils. General observations are to be brought up in the teachers' meetings.

10. The principal supervises the teachers. The latter must obey his instructions in all official matters. The principal must take steps against any abuse of authority or neglect of duty on the part of the teachers. He sees that teachers begin and close their classes punctually, that they conduct their classes according to schedule, that they follow closely the regulations dealing with methods of instruction, that they by their conduct in and out of school show themselves worthy of the respect, esteem, and trust which their calling demands. The principal is not allowed to inflict discipline upon the teachers, but he is justified in warning and advising them concerning their conduct.

11. He shall assist the teachers to the best of his ability in the fulfillment of their duties by means of useful advice. The principal shall advise teachers as to further education for their calling.

12. It is the duty of the principal to install new teachers in office and provide them with instructions concerning the scope of their work. He must inform the school deputation or the school board and the district school inspector of the entrance of teachers into service and must send the district school inspector a detailed report of the teachers' personal affairs; preparation, career, and the like.

13. The principal is allowed in case of urgent necessity to grant leave of absence to teachers or himself for three days. He must accept requests for longer leaves of absence and forward them to the proper authorities. (Further instructions as to longer leaves of absence and as to arrangement for substitute teachers are issued to the principals.) Provisional cases of substitution are arranged in all cases by the principal. At the end of every leave the teacher must report in person to the principal.

14. It is the duty of the principal to hold a teachers' meeting at least once a month in order to consider school affairs, to exchange experiences, and to give and receive inspiration for better work. In special cases the



principal may call extraordinary meetings. The meetings are held outside regular hours and are presided over by the principal. All teachers are required to attend these meetings. The order of the day in these conferences, to which every member of the teaching staff may bring proposals, is announced, when possible, two days before the meeting. Personal affairs, complaints concerning one another or the principal, do not belong in these conferences. A majority vote decides, the principal's vote deciding in case of a tie. If the decisions reached do not seem to the principal to be consistent with the regulations of the authorities or with the best interests of the school, he must invite the decision of the district school inspector. In case the principal rejects a subject brought up for discussion or rejects the vote and the teacher who introduced the discussion is not satisfied, a record of the proceedings is taken down by a teacher. This record is signed by the principal and the recording secretary.

15. Written petitions to superiors from teachers are given to the principal and are forwarded to higher authorities as soon as possible, with a mark to show he has read them, or with his opinion thereon, if necessary.

16. In cases of complaints of parents against teachers, the principal determines the facts and if he cannot settle the matter himself, he must carry it up to the district school inspector.

17. The principal must also watch the matter of attendance of pupils closely. It is likewise his duty to see that regular rolls of every class are kept by the several teachers; to inspect the keeping of class books, and to effect a punctual delivery of absentee reports, which are kept and given to him by the class teachers.

18. At the request of a parent the principal may grant a pupil a leave of absence up to eight days, *after* he has convinced himself of the necessity thereof and after he has conferred with the class teacher concerned as to the advisability thereof. The class teacher must be informed immediately by the principal of the leave of absence granted.

19. The principal orders promotion of pupils after conference with the teachers. It is also his duty to see that the regulations controlling discharge of pupils from the school are closely observed. Requests for the discharge of pupils before the legal age are forwarded to the higher authorities, by the principal, together with the facts bearing on the case. General regulations control the enrollment and transfer of pupils, and cases of truancy.

20. The principal's activity extends to all phases of school discipline. He must see that the pupils of all classes become accustomed to obedience, industry, orderliness, promptness, and decency. He must also endeavor to influence the conduct of his pupils outside the school. Likewise it is his duty to effect friendly relations between school and home. The principal must provide for supervision of the pupils during recesses and before and after school. It is further the principal's duty to supervise punishments which must be inflicted and to make arrangements so that pupils kept in after school are not left without supervision. The principal is to prevent any abuse of the disciplinary power on the part of the teachers.

21. The physical welfare of the pupils is also a matter under the principal's care. He is to insist on the teacher's giving attention to the eyes, bodily defects, and illness among his pupils. For the prevention and control of contagious diseases the principal must follow regulations of the health authorities governing these matters.

22. It is the further duty of the principal to watch with care that order and cleanliness prevail on all school premises, that the classrooms are carefully and regularly aired, and that the seating is proper for the different classes. He must also see that the prescribed school apparatus is on hand and that it is well taken care of. He is to report to the school deputation or school board any deficiencies in equipment and any damage done thereto. A record of all school property is also kept by him.

Such is the administration of elementary education in Prussia. Little initiative is left to the administrative officers as far as external affairs of the schools and school management are concerned. Practically every move of the inspectors, superintendents, principals, and teachers is prescribed by school laws. As far as our observation has carried us, the rigidity in the administration and management of the schools does not at all kill originality and individuality in methods, reforms, and improvements, which cities or teachers may wish to undertake. Organization in the Prussian schools merely means a mechanization of those administrative processes which should be as nearly automatic as possible to insure a smoothly running machine. The real school system is thoroughly alive and growing.

**Conclusion**

## CHAPTER III

### GENERAL RELATIONSHIPS OF SCHOOL SYSTEMS

It is necessary to present a bird's-eye view of the entire public school system in Germany in order that the reader may receive a clear conception of the *Volksschule*. The function of the *Volksschule*, its position in the whole educational scheme, and its relations to the various other parts of the system will be briefly indicated, though many details will have to be omitted for the sake of clearness.

Each of the twenty-six German federal states has its own school system, just as each American state has its own system. Since Prussia is the largest and most populous state, containing about two thirds of Germany's population within its borders, a study of the Prussian school system will afford a fair idea of every other German system. As a matter of fact, the schools in all the other states are organized in much the same way as those of Prussia. As might be expected, there are many minor differences among so many independent states, but we may safely take the Prussian system as typical of all.

In America we have the unit system of schools, *i.e.* one type of school superimposed upon the other. In Prussia, however, the public schools are organized into three distinct parallel systems, the lower, the middle, and the higher schools, as indicated by the diagram on page 89. These parallel systems have arisen to meet the needs of the different social strata which exist in German society.

The schools of the lower system are called *Volksschulen*,

and they correspond very closely to our public elementary schools in that the course is eight years in length in both. As far as numbers are concerned, the *Volksschulen* are by far the most important, since over 90 per cent of the children of school age are enrolled in these schools. They take the children at the age of six and keep them throughout the compulsory attendance period. Further reference to the diagram will show that the *Volksschulen* are paralleled in the elementary classes by both the middle and the higher schools. This presents a striking contrast to our American elementary and high schools, in that our higher schools begin where the elementary schools leave off, while in Germany all systems, lower, middle, and higher, begin with the primary classes, but run along different lines and continue upward for varying numbers of years.

The aim of the elementary school is to develop efficient German citizens, — to give boys and girls moral and religious training, to furnish them with that general fund of knowledge every intelligent, independent citizen must have, and, above all, to make them patriotic members of society. The *Volksschulen*, as well as the middle and higher schools, are institutions of general training, and in themselves do not aim to prepare for any definite career; that is, they do not prepare boys and girls for a special trade or calling. It is true, however, that the pupils of any one system are somewhat limited to particular fields of work, certain walks in life being closed to them, because they have not had in school those subjects which this or that calling presupposes. For example, it would be impossible for a boy who had gone through the *Volksschule* to study law, because he has had no Latin, which the study of law presupposes.

The pupils of the *Volksschulen* are children of day laborers, peasants, small farmers, waiters, clerks, porters, truck drivers, janitors, lower railway employees, blacksmiths, locksmiths, and

other workers of this order. It often occurs, however, that the children of higher classes attend the lower schools, for the first three years, especially in small towns or in the country where there are no preparatory classes for the higher schools.

Pupils of  
the *Volksschulen*

The child remains eight years in the *Volksschule* and his training is altogether general. At the end he has learned to read, write, count, and sing; he has gathered something concerning nature and the daily life about him; and has been taught his duties toward God and his fellow men. When this is done, he is free to choose his work within certain fields. As a rule he selects some trade or calling and becomes an apprentice, at the same time completing his education in a continuation school, or in some kind of a trade school.

General  
Nature of  
the Course

In Berlin in 1908-09, the boys and girls, who had finished the *Volksschulen* selected the following vocations:

Trades  
Adopted by  
Pupils of  
the *Volksschulen*

VOCATIONS ADOPTED BY PUPILS OF BERLIN *VOLKSSCHULEN*,  
1908-09

	Boys	Girls
Remain at home . . . . .	1,741	6,851
Day labor . . . . .	2,044	
Handicrafts . . . . .	4,192	1,347
Factory work . . . . .	147	314
Technical industry . . . . .	1,136	
Art trades . . . . .	434	
Agriculture, gardening . . . . .	151	
Commerce and trade . . . . .	1,480	2,444
Hotel work . . . . .	201	
Clerkship . . . . .	689	
Trade schools . . . . .	251	
Higher schools . . . . .	30	147
Housework . . . . .		2,102
Art . . . . .		42
Civil service . . . . .		26
	12,469	13,273

The table shows rather clearly the walks into which the elementary schools turn their pupils. It must be kept in mind that the children are not through with their education when they have finished the *Volksschulen*, for in all cities over ten thousand population the pupils of the elementary schools are obliged to attend continuation schools to fit them for the callings which they have selected, and in which they have already begun their apprenticeship.

The middle school (*Mittelschule*) is an extended form of the *Volksschule*. It sets higher aims, and treats each subject a little more intensively than in the lower school. The course of the middle school offers one or two modern languages and sometimes Latin. The middle school system exists in large cities side by side with the lower and higher school systems, yet is entirely independent of them. It occupies the middle ground between the lower and higher schools. The middle schools charge a tuition fee, though this is smaller than the fees charged in the higher schools, while the *Volksschulen* are entirely free. The middle schools arose out of a need felt by some of the parents for a little better education and better social surroundings for their children — the poorer elements of society being necessarily eliminated by means of the tuition fee. The middle schools are attended by the children of under state officials, small shopkeepers, small independent tailors, skilled mechanics, and the like, — in a word, the children of the lower middle class.

To every one of these statements there are many exceptions, very much depending on where the middle school is located, and what kind of middle school it is. The new type is a nine-year institution, beginning with the lowest primary classes. Many middle schools have only a six-year course, which is built up on the first three years of the *Volksschule*; others have a three-year course superimposed upon

Course of  
a Middle  
School

the first six years of a *Volksschule*. In small cities and towns the children of the better families attend the *Volksschule* for the first three school years and then transfer to a middle or higher school. It is consequently difficult to define a middle school, for this institution exists in all possible forms, from a one-year course to a ten-year course. In all forms, however, the object is to give a little better and more extensive course of instruction than the local *Volksschule* can give.

In Prussia there are 1551 middle schools (1911), including both public and private institutions for both sexes. In addition to these schools, there are also middle school classes organized in connection with the *Volksschulen*. In 1911 there were 255,527 pupils enrolled in these schools, while there were over six and a half millions in the *Volksschulen*. Thus one child attends the middle school where twenty-six attend the *Volksschule*.

The social distinction and the better social atmosphere of the middle schools make them preferable to the *Volksschulen*. The boy who has attended and completed the full middle school needs to serve only one year in the army, and he is exempt from attendance at compulsory continuation schools. Further, according to the new organization of the middle schools, the transfer to the higher schools (*Gymnasium*, *Realgymnasium*, and *Oberrealschule*) is made rather easy, whereas it is almost impossible to enter the higher schools from the upper classes of the *Volksschule*. Transfer to the higher schools is possible even after six years in the middle school, due to the fact that the middle school offers English, French, and Latin, without some one of which entrance into the higher schools is impossible. Pupils who have attended a middle school have a better opportunity for securing a higher position in life than have the pupils of the *Volksschulen*. The former attain the more desirable positions as bookkeepers,

Number of  
Middle  
Schools

Advantage  
of the  
Middle  
School

merchants, skilled workmen, mechanics, and school-teachers, and in general reach the same social level as that occupied by their parents. The transfer from one stratum of society to another is very difficult, although possible.

Parallel with the *Volksschulen* and the middle schools we find the higher schools, duplicating them in the lower classes, but reaching up much higher and having a far broader scope. The diagram on page 89 makes clear the relations of these three systems to one another. Like the middle schools, the higher schools denote a social distinction, inasmuch as they are attended by the highest and best classes. The pupils are the children of the nobility, high officials, army officers, rich landowners, the larger merchants, manufacturers, and teachers in higher institutions. There are also children of the poorer classes in these institutions frequently, but they are out of place socially.

There are in general three types of higher schools, the *Gymnasium*, the *Realgymnasium*, and the *Oberrealschule*. They are built up on the first three years' work of the *Volksschule* or a preparatory school (*Vorschule*), which is connected with a higher school or exists expressly to prepare boys for the higher institutions. Accordingly the higher schools take children at the age of nine and educate them until they are eighteen, since the course in all these schools extends over nine years. The *Gymnasium* is the humanistic school, still retaining Greek and Latin, English being only elective. The *Realgymnasium* has no Greek in its course, but prescribes English instead, while the *Oberrealschule* has neither Greek nor Latin, but a great deal of French, English, and science. All of these institutions prepare for the universities.<sup>1</sup>

As the diagram on page 89 indicates, there are other types of higher schools besides those mentioned. Very frequently the

<sup>1</sup> Russell, *German Higher Schools*.



first six years of the course in the *Gymnasium*, the *Realgymnasium*, and the *Oberrealschule* are organized into schools, giving us the *Progymnasium*, the *Realprogymnasium* and the *Real-* Abbre-  
viated  
Types of  
Higher  
Schools  
*schule*. They are nothing more than the lower six years of the *Gymnasium*, *Realgymnasium*, and the *Oberrealschule*, respectively. They are generally found in cities which cannot afford the full type of higher school, or in towns where there is a large demand for a higher school for boys who wish to pass the one-year volunteer examination, but who do not wish to remain longer in school. It goes without saying that a pupil can transfer from the abbreviated type of higher school to a full higher school of corresponding nature without examination.

A great many of the pupils of the higher schools do not finish the course at these institutions, but leave as soon as they have received the one-year volunteer certificate, which is granted at the end of the sixth year in the higher schools of any type, provided the examination for this certificate is successfully passed. Boys who leave the higher schools at this time, which corresponds to the last year in the abbreviated form of higher schools mentioned above, either become merchants, druggists, and state officials, or they enter some trade or technical school. Many of them leave school at this point with the intention of becoming army officers.

We are concerned here principally with the relation of the *Volksschule* to the schools of the other systems. The schools of the higher system lead to the universities, the higher technical schools, and the professional schools. Relation of  
the *Volks-  
schule* to  
the Other  
Schools  
The pupils of the higher schools are the future leaders in Prussia, the future lawyers, doctors, high state officials, bankers, landed proprietors, railroad directors, university professors, and army officers.

What chance does a pupil of the *Volksschule* have of getting

into a higher school, for example, a *Gymnasium*?<sup>1</sup> Practically, he has no chance, unless he enter the higher school at the age of nine, after he has been in the *Volksschule* only three years. At this point the transfer is easy and takes place frequently, especially in small towns or in communities where the *Gymnasien* have no preparatory departments. After this point in a pupil's career, the chances against transfer from the elementary to a higher school are about a thousand to one. There is nothing in the law to prevent a boy who has completed the *Volksschule* from entering a higher school, but it is nearly impossible, on account of the lack of foreign language training which the boy in the higher school has had since the very first year of his course. Hence, we see that if a boy remained eight years in the lower school, a transfer to the higher school would be out of the question, since he would be four years behind in his foreign language work. The differences in the subjects of instruction are so great that a change from one system to another is quite impossible after the fourth year.

In answer to this question, one may say, then, that a pupil of the elementary or lower system never gets to the higher system, except he enter the first year of the higher school, — the fourth school year. He never gets to the university at all, unless he does so by private instruction.

A pupil can go from the *Volksschule* to the university in a roundabout way. There are quite a number of teachers of the *Volksschulen* who have passed the leaving examination of the higher schools, which admits to the university. These teachers have finished the *Volksschulen* in eight years, have attended the normal pre-

<sup>1</sup> From reports current in this country at the time of the publication of this book, it seems that there are changes contemplated in Prussia looking to an easier passage from the lower to higher schools. The *Einheitsschule*, which means one school in the lower grades for all classes of society, seems to be making rapid advance.

paratory school for three years, and the normal school for three years. After finishing the normal schools and while teaching, they have studied privately and passed the leaving examination of the higher schools, being finally admitted to the university.

The transfer from the *Volksschule* to the middle school is not very difficult, because the subjects of instruction are very much the same in the first five years of both schools, and transfer is possible even later than that, though it entails some loss of time on the part of the pupil from the lower school. According to the new regulations reorganizing the middle schools, transfer from the middle schools to the higher schools is made much easier than heretofore, and is possible as late as after the sixth year in school. For example, a boy who has attended the middle school for six years may transfer into the sixth class (*Untersekunda*) of the higher school, thus sacrificing one year's time. Though the transfer has been made easier still, for social reasons pupils of the middle school do not take much advantage of the opportunity.

Transfer  
to and from  
Middle  
Schools

The *Volksschulen* in Germany are, therefore, for the very large under class. Class lines are very marked, and those lower orders of society which send their children to the *Volksschulen* very rarely even think of breaking over into the forbidden fields. There is, furthermore, a marked difference in the quality of pupils in the upper schools and those of the lower. The lower classes unconsciously admit their inferiority in their attitude to the ruling ten thousand, and they have maintained this attitude for so long, that they are now really inferior, mentally, morally, and physically. This inferiority may often show itself in a form of hatred of the better classes, or in an uncouth impudence or bravado, but it is nevertheless an acknowledged inferiority.

Classes in  
Germany

One must keep this in mind when studying the *Volksschulen*, for the course of study is not planned with any other thought in

mind than that the boys and girls who attend these schools are to be the day laborers, the servants, and the burden carriers in an aristocratic limited monarchy. There are no other chances for these under classes. In America a boy may rise as high as his ability fits him to go. In Germany a child is born into a class and stays there.

It must be kept in mind that the *Volksschule* exists in many forms, just as the American elementary school does. In larger

cities and towns the *Volksschule* generally has six or more grades. A school with eight grades is probably the ideal, but comparatively few such schools exist.

The quality of the *Volksschule* is frequently as variable as in America.

The table on the following page shows the number of school children in the elementary schools of Prussia, separated with regard to the number of classes in the schools which they attend. The statistics on pages 91-103 show the number of *Volksschulen* in the German empire, as well as the number of pupils, pupils per teacher, average salaries, cost per pupil, and the like. (See also chapter on The Organization of the *Volksschulen*.)

In 1911 in Prussia there were the following number of *Volksschulen* and children in attendance thereon.

# PRUSSIAN SCHOOL SYSTEM<sup>1</sup>

Age. 21	School 16 Year	Service in the Army						
20	15		Higher Technical Schools					
19	14							
18	13							
17	12		Middle Technical Schools	Oberrealschule	Realgymnasium	Gymnasium		
16	11	Lower Tech- nical Schools						
15	10							
14	9		Realschule	Frankfort or Altona Plan of Common Foundation				
13	8	Volksschule Mittelschule						
12	7							
11	6							
10	5							
9	4		Vorschule or Volksschule					
8	3							
7	2							
6	1							

<sup>1</sup> After Rein.

TYPES OF *VOLKSSCHULEN* IN PRUSSIA AND CHILDREN IN THE  
VARIOUS TYPES

	CITY		COUNTRY		TOTAL	
	Schools	Pupils	Schools	Pupils	Schools	Pupils
One-class school . .	396	13,942	33,175	650,536	13,571	664,478
Half-day school . .	59	4,316	6,596	522,850	6,655	527,166
Two-class school . .	233	22,261	4,246	480,620	4,479	502,881
Three-class school .	334	50,297	5,570	860,786	5,904	911,083
Four-class school . .	312	74,769	1,617	383,626	1,929	458,395
Five-class school . .	275	80,967	901	290,473	1,176	371,440
Six-class school . .	827	402,250	657	294,174	1,484	696,424
Seven-class school .	2050	1,422,634	759	506,467	2,809	1,929,101
Eight-class school .	639	<sup>1</sup> 475,317	38	<sup>2</sup> 35,855	677	511,172
Total . . . .	5125	2,546,753	33,559	4,025,387	38,684	6,572,140

A brief study of this table shows that the *Volksschule* is organized in widely varying forms. The schools of a few classes are generally found in the country, while the schools in the cities, where more money is available, are organized chiefly on the basis of six or more classes.

The purpose of this chapter is only to set forth the *Volksschule* in its relation to the other schools existing by its side.

<sup>1</sup> This total includes 11,288 children who are enrolled in classes or grades advanced beyond the eighth.

<sup>2</sup> This total includes 1350 children who are enrolled in classes or grades advanced beyond the eighth.

## CHAPTER IV

### STATISTICS OF THE PRUSSIAN ELEMENTARY SCHOOLS<sup>1</sup>

THE birth rate has decreased very rapidly in Germany in the last thirty years, especially within the last ten years. The decrease has been more rapid in the cities than in the country, and it has been particularly marked in the families of handworkers and others industrially employed. The causes for this decrease are the same as in other modern countries, except that the decrease has been more rapid in the last decade in Germany than in any other European country. The birth rate in Germany is still much higher than in France, England, or America, though the present tendency is alarming. It must be mentioned that the death rate has also decreased, but not in comparison with the birth rate.<sup>2</sup> The figures on the following page, from the *Schulstatistischen Blätter*, January 16, 1913, show the rate of the decrease.

Effect of  
Decrease in  
Birth Rate  
on the  
Schools

The number of children in the *Volksschulen* of Prussia in 1901, 1906, and 1911, was 3,670,870; 6,164,398; and 6,572,140 respectively. The increase in the number of pupils from 1901 to 1906 was 8.7 per cent, while the increase from 1906 to 1911 was only 6.61 per cent. A very large decrease in the growth of *Volksschulen* is clearly indicated. This decrease is partly due to the fact that more and more children are going every year to the higher schools, but

Effect of  
Decreased  
Birth Rate  
on *Volksschulen*

<sup>1</sup> The figures quoted in this and the following chapter are based on the following sources (q.v.):

1. *Statistisches Jahrbuch des deutschen Reiches*, 1913.
2. *Statistisches Jahrbuch für den preussischen Staat*, 1913.
3. *Vierteljahrshefte zur Statistik des deutschen Reiches*, vol. 22, 1913.
4. *Schulstatistische Blätter*, 1912-1914.

<sup>2</sup> *Statistisches Jahrbuch des deutschen Reiches* (1913) and *Statistisches Jahrbuch für den preussischen Staat* (1913).

## BIRTH AND DEATH RATE IN GERMAN CITIES IN 1875-6 AND 1910-11

CITY	PER 1000 INHABITANTS				EXCESS OF BIRTHS OVER DEATHS		ABSOLUTE DECREASE		
	BIRTHS		DEATHS				Births	Deaths	Surplus
	1875-6	1910-11	1875-6	1910-11	1875-6	1910-11			
Altona . . .	43.57	23.19	27.23	16.16	16.34	7.03	20.38	11.07	9.31
Berlin . . .	44.65	21.00	31.22	15.07	13.43	5.93	23.65	16.15	7.50
Breslau . . .	41.94	27.26	32.10	19.80	9.84	7.46	14.78	12.30	2.48
Charlottenburg	47.16	18.90	34.05	11.35	13.11	7.55	28.26	22.70	5.56
Elberfeld . .	44.45	24.51	28.21	12.75	16.24	11.76	19.94	15.46	4.48
Essen . . .	56.00	31.11	28.87	13.28	27.13	17.83	24.89	15.59	9.30
Hannover . .	38.32	21.15	20.72	13.23	17.60	7.92	17.17	7.49	9.68
Chermutz . .	52.74	27.89	31.08	16.39	21.66	11.44	24.91	14.69	10.22
Dresden . . .	37.53	20.87	24.88	14.16	12.65	6.71	16.66	10.72	5.94
Hamburg . . .	40.57	23.54	24.97	14.49	15.60	9.05	17.03	10.48	6.55
Munich . . .	43.84	22.97	34.75	15.93	9.09	7.04	20.87	18.82	2.05
Strassburg . .	39.42	23.21	30.42	16.33	9.00	6.88	16.21	14.09	2.12
Stuttgart . .	44.08	24.46	27.53	14.34	16.55	10.12	19.62	13.19	6.43

the falling off in the birth rate among the working classes is the chief factor in producing this result. German statisticians estimate that the number of children in the *Volksschulen* will reach a standstill in a very few years.<sup>1</sup> At the same time the number of Catholic children in the *Volksschulen* has increased very much more rapidly than the number of Protestant children.<sup>2</sup> There are two reasons for this apparently. First, the Protestant children attend the higher schools in proportionately greater numbers; and, secondly, the birth rate is considerably higher in Catholic than Protestant families.

## SCHOOL CHILDREN OF DIFFERENT RELIGIOUS DENOMINATIONS

	1886	1891	1896	1901	1906	1911
Protestant . .	3,062,856	3,107,701	3,296,481	3,507,715	3,724,547	3,871,902
Catholic . . .	1,730,402	1,766,835	1,901,013	2,118,815	2,391,980	2,650,722
Jews . . . .	35,420	30,386	27,015	24,022	22,211	19,965
Others . . . .	9,569	11,554	12,317	20,318	20,318	29,551

<sup>1</sup> See article by Dr. Sachse in "*Verwaltung und Statistik*," No. 3, 1913.

<sup>2</sup> *Statistisches Jahrbuch für den preussischen Staat*, 1913, p. 402.



The number of school children increased 35.8 per cent in the twenty-five years. Protestant children in the *Volksschulen* increased only 26.4 per cent, while the number of Catholic school children increased 53.2 per cent. Not only did the Catholic pupils make a greater relative gain, but also a greater absolute increase. During the period indicated the Protestant children increased 809,046, while the Catholics increased 920,320. The number of Jewish children has very rapidly decreased from 35,420 to 19,965. This is owing largely to the fact that the Jews take advantage of higher education wherever possible, even if it means financial sacrifice.

The *Volksschule* is the school of the people. Nine children out of every ten receive a common school education, that is, they are educated in the *Volksschulen*. The other child of the ten goes to some other form of school. In all Germany, 892 boys from each thousand attend the *Volksschule*, 27 attend the middle school, 8 the *Vorschule*, which is a preparatory school for the higher schools, and 73 receive their training in the higher schools. Among the girls the figures are 923, 35, 0.1, and 42 respectively, from which it is evident that the boys receive the benefits of higher education in greater numbers than do the girls. In some other states the figures vary greatly from the average, but such states have on the whole comparatively few inhabitants. Bavaria shows a very high proportion of children in the *Volksschulen*, while the manufacturing centers like Württemberg, Hesse, Bremen, Lübeck, and Hamburg show large numbers in the higher schools. The showing of Bavaria is really as good as the others in regard to higher education, for there are compulsory continuation schools with three years' courses throughout this kingdom, which offsets any apparent advantage of the other states.

Relative  
Number of  
Pupils in  
Various  
Types of  
Public  
Schools

The total expenditures in Prussia in 1911 for *Volksschulen*,

middle schools, and higher schools, were 420,898,192 M., 25,760,324 M., and 113,287,974 M., respectively, with a total of 559,946,490 M. Of the total number of pupils 89.7 per cent were in the *Volksschulen*, 2.9 per cent in the middle schools, and the remainder, 7.4 per cent, were in the higher schools. As for the relative expenditures on these three types of schools, it is found that the *Volksschulen* got 75.2 per cent of each one thousand marks expended, the middle schools 4.0 per cent, and the higher schools 20.8 per cent.

The cost of a pupil of the *Volksschule* for one year is 64 M., or less than \$16, while pupils in the middle and higher schools cost 143 M. (\$34) and 296 M. (\$70) respectively. In other words, it costs on the average four and a half times as much to educate a boy in the higher school as it does in the *Volksschule*, and over twice as much as it costs in the middle school. The causes for the great differences lie in the higher cost of instruction and fewer pupils per teacher. Likewise the equipment in the higher schools is more expensive, but not decidedly so. The chief cause is the small numbers in the classes of higher schools. The lower schools prepare their pupils for the humbler walks of life, the higher schools for the leadership of the nation. Nevertheless, it is questionable if the average product of the *Gymnasium* is mentally, morally, and economically worth as much more than the average product of the *Volksschule* as the ratio of the costs of their education would indicate or ought to indicate.

The total expenditures for *Volksschulen*, middle schools, and higher schools in 1911 in all Germany were 877,561,848 M. or \$208,943,297. One begins to grasp the amount expended for education in Germany when one begins to consider the numerous other types of education, for example, the whole system of continuation training, normal schools for teachers, universities, technical schools, the most

Expenditures for  
*Volksschulen*,  
Middle and  
Higher  
Schools in  
Prussia,  
1911

Total Ex-  
penditures  
for Schools

expensive types of instruction. The pupil of the *Volksschule* costs 65 M. a year, the middle school pupil 112 M., and the pupil of the higher school 288 M. The lowest expenditure of all we find in Lippe, 43 M. yearly for an elementary pupil, and the highest in Hamburg, 123 M. In considering the averages, it must be kept in mind that they are based upon the number of children enrolled, which, for the lower schools in Germany, is the same as the number of children of legal school age on account of the rigid enforcement of the compulsory attendance law, and substantially the same as the average attendance. The cost of the school child in America is on the average much less than in Germany, though in some states as much or more. But we find no black pages of niggardly expenditure in Germany to compare with the conditions in South Carolina, Georgia, and other Southern states.

The total number of elementary public schools in Germany in 1911 was 61,557, with 10,309,949 pupils, and 187,485 full-time teachers. Of these teachers 20.8 per cent were women, which shows a large increase over the figures for 1901. Some states have almost no women teachers, while others employ a rather large percentage of women. The average number of children per teacher is decreasing, for in 1901 there were 61 pupils for each teacher, in 1906 a little more than 58, and in 1911 fewer than 55. In the cities the average is well under 50, for example, Lübeck with 31, Hamburg with 33, and Bremen with 41, while in some of the small principalities the average number is well over sixty. The total cost of the *Volksschulen* was in 1911 \$167,459,133, of which 31.9 per cent was borne by the state. In the larger states of Germany the state aid amounts to one third or one fourth of the total, while in the smaller states it ranges from 6.9 per cent in Mecklenburg-Schwerin to 86.8 per cent in Anhalt.

Statistics of  
the *Volksschulen* in  
Germany  
for 1911

The average number of pupils per teacher in the German

*Volksschulen* is 55, in the middle schools 30, in the preparatory 40, and in the higher 18.6. It was seen above that the pupil of the higher school cost \$70 per year, while the elementary school pupil cost \$16. The average number per teacher in the lower type school is just about three times that in the higher school, so this may be noted as one of the chief causes for the great difference in the cost of educating pupils in the lower and in the higher schools.

About one of every five elementary school-teachers is a woman. In Lübeck the women hold 47.3 per cent of the positions; in **Women** Alsace-Lorraine, 45.3; in Hamburg, 38; in West-  
**Teachers** phalia, 38; in Berlin, 36; in Rhineland, 36. In other words, in densely populated manufacturing districts the women are employed in large numbers, in the first place, because women prefer the cities, and second, because graded systems offer more opportunities for the employment of women teachers than do one- and two-class schools in agricultural sections, where the management is hard and where prejudice is still strong against "female teachers." For example, in East Prussia only 9.9 per cent of the teachers are women; in West Prussia, 9.1; in Pomerania, 10.3; in Posen, 7.2; and in Mecklenburg-Strelitz also 7.2; while in the smaller principalities the percentage is even less. In the middle schools there is a large percentage of women, due chiefly to the fact that middle schools are generally in large cities, where women are more largely employed as teachers than in the country. In the thirty-three Prussian cities of over 100,000 population, the percentage of women teachers in the *Volksschulen* is 32 per cent, about the same as the percentage of women teachers employed in the middle schools.<sup>1</sup>

It has been mentioned above that the average number of pupils per teacher in the *Volksschulen* was about 55. The

<sup>1</sup> *Schulstatistische Blätter*, Jan. 16, 1913, p. 2.

average number in each class in Prussia is somewhat less. It has not been possible to find figures for all Prussia showing the number of classes with less than thirty pupils, the number with between thirty and forty pupils, and so on. This sort of statistics would give us a much better picture of real class condition than can the ever misleading averages. The average number per class in Prussian cities of over 100,000 is 49, while the average for all the Prussian *Volksschulen* is 51.<sup>1</sup> In some cases it has been possible to obtain statistics which are illustrative of conditions in rural districts, if not in the cities. According to the statistical information of March 1, 1912, from Schwarzburg-Sondershausen, there were 98 public *Volksschulen*, with 279 classes, 14,718 pupils, and 258 teachers. On the average there were 53.3 pupils per class and 57.6 pupils per teacher. The actual conditions were as follows:

## ONE-CLASS SCHOOLS

NUMBER OF SCHOOLS	RANGE IN NUMBER OF CHILDREN
3	Fewer than 20 <sup>1</sup>
10	21-30
9	31-40
5	41-50
7	51-60
4	61-70
8	71-80
4	81-90
5	91-100
1	116
56	Total number of schools

<sup>1</sup> *Schulstatistische Blätter*, Jan. 16, 1913, p. 2.

## PRUSSIAN ELEMENTARY SCHOOLS

## TWO-CLASS SCHOOLS

NUMBER OF SCHOOLS	NUMBER OF CHILDREN	NUMBER OF TEACHERS
2	80-90	1
2	90-100	2
3	100-120	2
3	121-140	2
3	141-150	2
1	158	2
14	Total schools	

## THREE-CLASS SCHOOLS

NUMBER OF SCHOOLS	NUMBER OF CHILDREN	NUMBER OF TEACHERS
1	113	2
1	116	2
1	132	2
1	133	2
1	136	2
1	149	2
1	172	3
1	187	3
1	233	3
Total Number of Schools — 9		

## FOUR-CLASS SCHOOLS

NUMBER OF SCHOOLS	NUMBER OF CHILDREN	NUMBER OF TEACHERS
1	240	2
1	230	3
1	218	4
1	219	4
1	278	4
1	280	4
Total Schools — 6		

## SIX-CLASS SCHOOLS

NUMBER OF SCHOOLS	NUMBER OF CHILDREN	NUMBER OF TEACHERS
1	203	3
1	295	5
1	345	4
Total Schools		

There were 2 schools with seven classes with 364 and 518 pupils, and 5 teachers and 7 teachers respectively; 2 schools with eight classes, each with 8 teachers and 553 and 570 pupils; 1 school with eleven classes, 510 children, and 10 teachers; 3 schools each with 14 classes respectively 753, 657, and 602 children and 12, 14, and 16 teachers; 1 school with 21 classes, 943 children, and 22 teachers; 1 school with 22 classes, 964 children, and 21 teachers. The 14,871 school children were divided among 279 classes as follows:

## DISTRIBUTION OF PUPILS ACCORDING TO NUMBERS IN CLASSES

Less than 20 Pupils in 3 Classes 1.0%	71-80 Pupils in 30 Classes 10.7%
21-30 Pupils in 17 Classes 6.0%	81-90 Pupils in 8 Classes 2.8%
31-40 Pupils in 36 Classes 12.9%	91-100 Pupils in 4 Classes 1.3%
41-50 Pupils in 85 Classes 30.4%	101-110 Pupils in 1 Class 0.03%
51-60 Pupils in 54 Classes 19.3%	111-120 Pupils in 2 Classes 0.07%
61-70 Pupils in 38 Classes 13.6%	over 120 Pupils in 1 Class 0.03%

From this last table we see that the middle 50 per cent of the classes have from 41 to 60 pupils, more than 25 per cent of the classes have more than 60 pupils, and about 20 per cent have less than 40 pupils. There are some classes with 90 and one class with 116(!) in it. Such conditions are not at all scarce in rural sections of Germany, though the average never shows what the extremes are.

## SCHOOL MAINTENANCE IN PRUSSIA

Before the enforcement of compulsory school attendance, schools were looked upon as a *private* matter. Education was not considered then a matter of common interest, and the costs were laid entirely upon the shoulders of the parents, although the church, of course, gave aid in exchange for its control of the schools. Tuition was charged in all public schools and in this way the schools were supported. While the *Allgemeine Landrecht* of 1794 declared the schools to be institutions of the state, it laid no part of the burden of their support upon the state, but assigned it to heads of families and other legally and economically independent persons dwelling in the school district, whether they had children or not. The maintenance of the public *Volksschulen* devolved upon school societies, which formed their own corporations. These school societies continued until the passage of the School Maintenance Law in 1906, when they passed out of existence. School fees were the chief source of revenue for these school societies. The remainder of the school expense was divided among the heads of families according to their financial condition. Schools on landed estates depended upon the lords of the manor for their support. None of the newly acquired Prussian provinces had school laws which made the state responsible for the costs of public education. In fact, in most of the provinces and principalities there was general confusion in regard to the raising of school moneys; part was levied in this way, part was raised in that, part was the income of some foundation, and so on. There was continual confusion and no definite, clear-cut policy was followed, at least no uniform policy for the whole kingdom. The Prussian government, of course, recognized the faults many years ago, but circumstances involving religious and political questions would not permit an easy reorganization



of school property for the matter of raising school funds. In 1817 the plan of giving over the burden of school maintenance to the civil communities was discussed and was embodied in the school law for the province of Prussia in 1845. Article 25 of the constitution of 1850 declared that the means for the support of the public schools were to be raised by the civil communities, and in case of lack of funds the deficiency was to be made up by the state. Nothing came of this, however, and the schools were supported as before. They were waiting for the passage of a general school law, which has not yet appeared, although laws covering various phases of the school administration have been passed. Many attempts were made to regulate the matter, but all such efforts failed. In 1889 school fees were abolished, which was one step in the right direction, and state aid was granted to all political communities (*Gemeinde*). State aid to civil communities was later limited to those in which the school corporation employed fewer than twenty-six teachers.

Previous to the passing of the School Maintenance Law of 1906, the legal bases of state aid rested (1) upon Article 26 of the constitution which granted aid to communities which could not support their schools alone; (2) upon the pension law of 1885 under which the state contributed to the pensions of retired teachers, and again by the Pension Fund Law of 1893; (3) upon the salary law of 1897 under which the state granted support in payment of teachers' salaries in communities employing fewer than twenty-six teachers, also moving and traveling expenses for teachers and perpetual grants for communities which lost state aid through changes brought about by the salary law; (4) and upon the Widows' and Orphans' Pension Law of 1899, by which the state contributes a part of the pension. The law of 1906 affected none of the foregoing laws mentioned. This law took away the obligation of school maintenance from the confessional (sectarian)

School  
Mainte-  
nance Law  
of 1906

school societies and lodged it with the political, civil communities. School societies were abolished. School corporations (*Verbände*) were formed in their stead. Civil communities which previously had borne the costs of the schools continued as before. Under the new law the state, the political communities, and the lords of manors are responsible for the support of the schools. Outside civil communities, other school corporations, foundations, and Jewish school "societies" are allowed to remain in case they exist under special provision, and they too are made co-bearers of the public expenditures. The State itself assumes more of the burden than heretofore. State aids which are new are as follows: (1) 5,000,000 marks for equalization purposes among poorer corporations which have suffered by changes produced by the law; (2) aids for poor corporations with less than twenty-six teachers; (3) building aid for school corporations with less than eight teachers; (4) aid for school corporations in establishing a central fund where there are more than twenty-five teachers; (5) establishment of new positions for teachers; (6) building aid for corporations with fewer than twenty-six teachers. Aid in various forms as mentioned above is still paid by the state.

Attention is now called to the actual expenditures for the Prussian elementary schools. The burden is carried by the two political units: the state, and the civil community, which, acting as a unit of school organization and administration, forms a school corporation (*Schulverband*). Under civil communities must be included landed estates or manors (*Gutsbezirke*) and other school corporations. As a rule each political or civil community, also landed estate, forms its own school corporation. This school corporation, which in reality is the civil community, is responsible for all expenditures for schools which are not granted by the state. The state contributes in Prussia and in all Germany about one third of the total expenditure. The reader can see

Bearers of  
School Bur-  
dens in  
Prussia

readily the proportion which each item of state aid receives. The largest items are: the aid for teachers' salaries, the basal salary (*Grundgehalt*, see p. 199), age salary increments, and temporary grants to poorer communities for general support of the schools. On the side of the local community almost all of the money is given by the regular school corporations, that is, by the community itself.

Over four fifths of the total expenditures are personal, while material expenditures are but little less than one fifth. Teachers' salaries actually constitute the biggest item of expenditure by amounting to about 70 per cent of the grand total. One of the other items is worthy of attention, the total cost of heating and cleaning buildings and the salaries of janitors. In 1911 this amounted to \$4,495,150, which to Americans seems extremely low, a little more than 4 per cent of the total expenditure. The causes for the extremely low cost of heating are not far to seek. In the first place, the climate in Prussia is much milder and more regular than in America and fuel costs are therefore much lower; second, very strict economy in the use of fuel is practiced; third, the ventilation systems are seldom connected organically with the heating systems; fourth, most of the schools ventilate very little except during recesses and a great deal of heated air is thus saved. Strict discipline as to the condition of the rooms brings the cleaning costs to a minimum.

The Prussian system of school maintenance recommends itself in that no community suffers because of lack of funds. Naturally some communities are richer than others, and can spend more money on schools than others, but no town or village is required to go without the necessary equipment in buildings, teachers, or in any other essential. If a corporation is too poor to pay for its schools, the state contributes enough money to bring them up to the required standard, without overburdening the taxpayers of any particular district.

## CHAPTER V

### SCHOOL ATTENDANCE

ALTHOUGH attempts at compulsory attendance had been made during the sixteenth and the seventeenth centuries, no great success resulted therefrom. Frederick William I by his Edict of September 28, 1717, took the first definite step in this direction in Prussia. The Edict reads in part :

In places where there are schools, parents shall be compelled under penalty of punishment to send their children to school every day in the winter, and once or twice a week in the summer.

Just what degree of success this regulation met with is not known. The General Rural School Regulation of August 12, 1763, also contained sections which authorized the enforcement of compulsory attendance.

Subsequently, school attendance was again regulated by the *Allgemeine Landrecht* of February 5, 1794, which is still in effect except for some minor changes. Some of the sections of this law run as follows :

§ 43. Every citizen who cannot or will not provide his children with the necessary instruction at home is compelled to send them to school after they have completed their *fifth* year.

§ 44. Only by the consent of the magistrate and the clerical school inspector (now the local inspector) may a child be kept out of school longer, or may the instruction be put off to a later time on account of local difficulties which may arise.

§ 46. The instruction must be continued until the child, in the opinion of his pastor (now the *Kreisschulinspektor*), has acquired knowledge sufficient for any reasonable man of his (the child's) position in society.

§ 48. It is the duty of the school authorities, with the aid of the civil authorities, to see that all children eligible for school according to the preceding regulations shall be compelled to attend school; if necessary by force, or by punishment of the negligent parents.

Likewise in the Cabinet Order of May 14, 1825, compulsory attendance was extended to the newly acquired provinces in Prussia and, as in the *Allgemeine Landrecht* of 1794, attendance at school was to begin after the completion of the fifth year. No definite termination of compulsory attendance was fixed by either of the regulations just quoted, except that a child was to be kept in school until he had acquired that knowledge which was considered necessary for his position in life.

As just stated, the first compulsory attendance laws in Prussia required the children to be sent to school at the completion of the fifth year. That age was found to be somewhat too young, and by a ministerial decree of 1862,<sup>1</sup> the administrative counties of the several provinces were allowed to postpone enrollment of pupils until after the completion of the *sixth* year. Accordingly, at present children start to school in Prussia after the completion of the sixth year. The child does not, however, enter school for the first time on his sixth birthday, but at the regular enrollment day falling nearest his sixth birthday. In provinces where children are enrolled once a year, — generally about April first or after Easter, — a child must be enrolled, if he has already completed his sixth, or if he shall have completed his sixth year within six months after the regular date of enrollment. In Dortmund, in Westphalia, the law reads as follows:<sup>2</sup>

Beginning  
of Compul-  
sory Age

§ 1. Children just entering the compulsory school age are enrolled in the public elementary schools once a year only; namely, at Easter, the beginning of the school year.

<sup>1</sup> *Min. Erl.*, 14 Jan. 1862, *Zentralblatt*, 1862, p. 121.

<sup>2</sup> *Dortmunder Bürgerbuch*, 1912, p. 152.

The administrative county board fixes the date of the beginning of the school year and of the enrollment.

Children, coming from other communities, who are of compulsory age, and who have already attended school, are enrolled at any time in the schools, and as soon as possible after their arrival.

§ 2. At the beginning of the school year, all those children become of compulsory age, who up till then have completed their sixth year, or will have completed it before October 1 of that year.

In districts or in provinces where children are admitted to school twice a year, children under six are enrolled who will complete their sixth year within three months after the date of enrollment.

The local police make up the lists of all children who are of school age and transmit these lists to the school deputations or boards about two weeks before the day of enrollment.

**Method of Enforcement of Compulsory Law** Notices are generally posted throughout the town announcing the date of enrollment, together with the law governing school attendance and the punishment which may be inflicted upon parents or guardians who neglect their duty. Thanks to these police lists, the school authorities know exactly what children are to be expected, and if such children do not appear, steps may then be taken to compel their attendance. Compulsory attendance means that all children shall take part in the instruction in all subjects taught in the *Volksschulen*, except that Jewish children are not required to be present at school when instruction in religion is given. Children of Protestant parentage as a rule are enrolled in Protestant schools, while Catholic children are enrolled in Catholic schools. No child, however, may be excluded from a school on account of his religious adherence, although children of one confession do not attend a school of another confession, if it can be avoided.

NOTE. — For provisions for religious instruction of children of differing creeds, see Chapter XV, p. 287.

When a child is enrolled in a school, he is required to present a certificate of baptism. Unbaptized children of Protestant

parents are sent to evangelical schools, while unbaptized children of Catholic parents go to Catholic schools.<sup>1</sup> Children of eleven years of age or over are required to present a vaccination certificate.<sup>2</sup>

There is no compulsory attendance law for the whole empire, but each state has a law of its own. There is an agreement between the states, however, that no citizen of the empire may, for any great length of time, keep his child out of school during the compulsory period. As in Prussia, compulsory attendance in most of the states begins after the child is six years old. In Württemberg and in Lippe-Detmold the school age begins one year later.

All children of school age are required to attend the *Volks-schulen* and partake of all the subjects of instruction, unless in other schools or privately educated, and they are also required to take part in school festivals and excursions. Compulsory attendance also includes the obligation on the part of parents to purchase books and other school material for their children. Exceptions are made, however, in the matter of attendance, there being both total and partial forms of exemption. The beginning of the school age may be put off with the consent of the school authorities, if the child lives far from a school, or if it seems best to keep the child out of school on account of his health. Blind, deaf, or dumb children are not compelled to attend regular schools, but must attend special schools, the blind being required to attend from six to fourteen and the deaf and dumb from six to fifteen. Children of another religious faith than that of the majority of the school are excused from the religious instruction, if they can prove that they receive such instruction from their own pastors or instructors in religion. Children without a religious faith are not excused. Jewish children may be excused from school on Satur-

Exemption  
from At-  
tendance

<sup>1</sup> *Min. Erl.*, September 27, 1880.

<sup>2</sup> Vaccination law of April 8, 1874.

day or holidays to worship in the synagogue, if their parents have received such permission from the authorities. Otherwise they must attend school. Jewish children who attend school on Saturdays or on holidays, however, cannot be compelled against the will of their parents to take part in written work.<sup>1</sup>

Children may be excused from gymnastics or physical training if they are physically weak or ill, but such dispensation requires a doctor's order. A child is excused from physical training for two weeks after vaccination. Children are also sometimes not required to attend school during the illness of parents who are too poor to hire a nurse or secure other care. Sickness, of course, removes from the children the obligation of attendance.

The compulsory school attendance period lasts generally eight years, from the completion of the sixth year to the completion of the fourteenth year. According to the Order of May 14, 1825, no definite age was set for the termination of the compulsory attendance, but the child was to be dismissed from school, when, in the opinion of his spiritual adviser (now the district school inspector) he had acquired the knowledge necessary for his position in life. There is then no definite age for the termination of this school period, nor is the child necessarily excused from attendance by the mere fact that he has been confirmed. As a matter of actual practice, dismissal from school and confirmation occur at the same time, generally at Easter or in the October following the completion of the fourteenth year. Dismissal from school, however, depends upon the school authorities. In East and West Prussia dismissal takes place on the fourteenth birthday. In Bavaria the compulsory period runs from six to thirteen, and in Württemberg and in Lippe-Detmold it lasts from seven to fourteen. As a

<sup>1</sup> *Erl.* of May 6, 1859; April 4, 1868; April 5, 1884, pp. 523, 333, and 346, of these years.



general rule, the German child must go to school from the age of six until the age of fourteen.

When the child leaves the school he receives a certificate of dismissal (*Entlassungszeugnis* or *Abgangszeugnis*), and once this certificate has been granted the child is no longer liable for compulsory attendance in the *Volksschule*.

The following passages from the school regulations of Westphalia<sup>1</sup> give a good idea of the manner of dismissal from a *Volksschule*.

§ 5. Dismissal from the public *Volksschule* takes place only once a year, to wit, at the close of the winter semester (April 1). . . .

§ 6. All children are eligible for dismissal at this time, who have completed the fourteenth year or will complete it before September 30, of that year, *provided* they have acquired sufficient knowledge and ability. If the latter is not the case, the compulsory attendance period can be extended one year by the district school inspector.

§ 4.<sup>2</sup> The possession of sufficient knowledge and ability (§ 6 above) is determined by an examination, which is held by the local school inspector, or, in schools directly under the supervision of the district school inspector by the latter. This examination can be given by the principal.

§ 5. If the examination shows sufficient ability on the part of the child, dismissal follows either by the local inspector or the principal.

To every child dismissed a certificate of dismissal is given which is signed by the teacher, the principal of the school, and the local inspector.

This, with what has been said previously, gives a fair idea of the enrollment and dismissal of children in elementary schools in Prussia, and also in all Germany. There is, however, no set rule for the whole empire, and in fact Prussia itself has by no means a uniform system in respect to ages of enroll-

<sup>1</sup> *Verordnung betreffend Regelung der Schulpflicht*, Jan. 9, 1907. *Provinz Westfalen*.

<sup>2</sup> *Anweisung zur Ausführung der Verordnung, betreffend Regelung der Schulpflicht für die Provinz Westfalen, vom 9 Januar, 1907*.

ment and dismissal, this matter being left to the several provinces to regulate, in order to accommodate their own local conditions.

There are no general regulations controlling the length of the leaves of absence which may be granted pupils, each administrative county regulating this to suit its own local conditions. In general a teacher may grant a leave of absence up to three days, but such leaves must not amount to more than one or two weeks in all within one half year. The principal of a school may grant a leave of eight days, while longer leaves must be granted either by the local inspector or by the district school inspector. Such leaves, of course, are granted only after the pupil has shown very good reasons for absence.

**Absences and Enforcement of the Compulsory Law** Absences from school may be excused on the following grounds only: (1) Leave of absence granted; (2) sickness of the child; (3) inclement weather and traffic blockade; (4) sickness of both parents at the same time.

The compulsory law is enforced in many ways if we consider the details of the process, but in general the following course is pursued. Two weeks before the day of enrollment each school receives a list of all pupils of school age in the district belonging to that particular school. This list is prepared by the police, and when new children move into the district, or when they move away, the police are acquainted with the fact and they in turn inform the school authorities. When the school term begins, the school officials check off on this list the names of children who have not appeared, and then return the list to the police, who investigate the matter.

Each teacher is required to keep an absentee record book (*Versäumnisliste*), in which a very careful record of attendance is kept along with absences and the reasons therefor (*i.e.* 1, fore-

noon; —, afternoon; +, whole day;  $\frac{+}{k}$ , whole day with permission; —., afternoon with permission; +, whole day on account of sickness). On the second day of a pupil's absence, the janitor of the school is sent to see why the child does not appear, and if the boy is playing truant, the parents are warned or are fined. If necessary, the child may be brought to the school by force.

The unexcused absences are transferred every week, every two weeks, or every month by the teacher from the absentee list to a special report form, and this is transmitted to the local school inspector, or to the principal of the school, who delivers such report to the local police authorities, the latter proceeding forthwith to the punishment of the parents. In some places the school commission has opportunity first to investigate the case, and then to warn the parents, or recommend their punishment to the police.

The penalties are either a warning, a money fine, or imprisonment. The first fine is usually from fifty pfennigs to three marks, that is, from twelve to seventy-five cents. If the parents cannot pay the fine, they are sent to jail for a period of from six hours up to two days. Money accruing from such fines is turned into the treasury of the school corporation, and utilized to buy books for poor children, or used to support the school library.

The number of children who escape school in Germany is very small; in fact, we might say that none do. Those who do avoid the law are generally children of people living on coastwise steamers or river boats. The following table<sup>1</sup> shows how carefully this law is enforced in Prussia. The figures are for 1871, 1891, 1901. The figures for 1911 were not available for this item, but the number of truants was no doubt smaller.

<sup>1</sup> Lexis, vol. III, p. 10.

NUMBER OF CHILDREN OF SCHOOL AGE IN PRUSSIA WHO ARE  
ENROLLED, EXCUSED, OR TRUANT

PRUSSIA	1871	1891	1901
Children of school age . . . . .	4,464,906	5,401,566	6,103,745
1. In <i>Volksschulen</i> . . . . .	3,900,655	4,916,476	5,670,870
Per cent . . . . .	87.36	91.02	92.91
2. In other schools . . . . .	222,211	390,500	339,017
Per cent . . . . .	4.98	7.23	5.55
3. Excused temporarily . . . . .	312,219	83,604	82,638
Per cent . . . . .	6.99	1.55	1.35
4. Not enrolled on account of crime .	9,038	10,041	10,672
Per cent . . . . .	0.20	0.18	0.18
5. Illegally out of school . . . . .	20,783	945	548
Per cent . . . . .	0.47	0.02	0.01

Thus in 1901 less than one child out of every ten thousand managed in one way or another to escape the law. This high degree of efficiency in the enforcement of the law is due to the registration by the police of all children born, of every change of residence even for the very shortest periods of time, and to the close coöperation between the school and the police authorities. There are never questions about the child's age, because every child is registered the day it is born, and has a birth certificate which is also registered, and which must be shown on demand until the person in question is dead and buried. We have not yet learned in America that the first requisites for an efficient compulsory school law are to know how many children there are, where they live, and their exact ages.

Another very radical difference between a German compulsory education law and those of some of our states is that in Germany a child must be in school all the time during the compulsory period, unless there is a legitimate excuse for absence, while in America a child may be absent from school a certain part of a year during the compulsory period, without being

obliged to furnish an excuse, or without being compelled to attend. This is the worst phase of our compulsory education laws, outside of the non-enforcement of such laws as we have.

### VACATIONS AND HOLIDAYS

The time and length of vacations is somewhat variable in the different parts of Prussia, because this matter is arranged by the several administrative counties and provinces, except **Regular Vacations** that the Minister of Education has issued orders, fixing in general the length of several vacations and setting a limit for the total number of school-free days. According to an order of March 19, 1904, the Minister prescribed that the total number of days of vacation, including the holidays and Sundays falling within those vacations, should be limited to seventy. As a rule, the *Volksschulen* receive a vacation of ten days at Christmas, twelve days at Easter, six at Whitsuntide, and six weeks in all for the summer and autumn vacations. In cities, the summer vacation is generally a little under five weeks, coming either in July or August, as best suits local conditions, while the autumn vacation of less than two weeks comes in October. This division of the long holidays is very different in the several provinces. In agricultural districts the vacations are arranged so as to fall as nearly as possible in harvest time, when the children can best be employed at home. During the harvest season, and even throughout the whole summer term, school sessions are often held only in the morning, leaving the pupils free for the greater part of the day.

The following school calendar of Stettin for 1913 gives the general plan of the school year in the eastern part **School Calendar** of Germany, as far as the cities are concerned, although the calendar for country districts will vary somewhat from this.

VACATIONS IN STETTIN *VOLKSSCHULEN*, 1913-1914

Easter . . . . .	April 3-April 15
Whitsuntide . . . . .	May 24-May 31
Summer . . . . .	July 3-August 2
Autumn . . . . .	October 5-October 16
Christmas . . . . .	December 23-January 7

Besides the vacations indicated, there is no school on the Emperor's birthday, Sedan Day, and primary election day for the *Landtag*. The schoolrooms are sometimes used for voting booths on election day for the *Reichstag*, and in such cases the pupils are excused. These holidays just mentioned are granted in addition to the seventy. Catholic schools and Catholic children have also a number of feast days free, which the other schools do not have.

Outside of the vacations and holidays mentioned, and Sundays, of course, the children are in school all the rest of the year. Taking seventy-five (75) days, including the eleven Sundays within the vacations and the remaining forty-one Sundays, there are about one hundred sixteen days in the year when the German child is not in school. This leaves a total number of school days of two hundred fifty (250), and in some cases the whole number is larger than this. New York City has only two hundred days a year, and the average number of school days per year in South Carolina is not much more than one hundred. The number of weeks per school year in Germany and New York City is about the same, forty-two and forty, respectively, but the German school week has six days, while the school week in New York has but five. In a child's school life of eight years there is a total advantage for the German child of about four hundred school days over the child of New York City. That is a difference of two New York school years. The reader himself can compare the length of the German school year with conditions in various parts of America, and it will not take long to find one reason for superiority of the German elementary school.

If the thermometer registers 25° C. (77° F.) in the shade at ten o'clock in the morning, school work on that day must be limited to four hours and children cannot be compelled to come to school again in the afternoon.<sup>1</sup> Since schools usually begin in summer at seven A.M. on such occasions the schools will be dismissed at eleven o'clock A.M. The "heat vacation" often occurs when the thermometer reads less than 77° F., if the rooms are crowded or the ceilings are low. The principal has the deciding voice in such matters in large cities, while the local school inspector decides in small towns and villages. The boys and girls always watch the thermometer very closely on warm summer days, hoping for an extra holiday. A boy said to me one day, "I wish we had some of the hot days that you have in America."

Vacations  
on Account  
of Heat

NOTE. — Since this section on holidays and vacations was written, the Prussian Minister has issued another regulation regarding vacations.<sup>2</sup> In part it reads as follows:

"1. The entire length of vacations, including Sundays and holidays falling therein, amounts to eighty days in the *Volksschulen*, middle, and higher schools, and also in the normal schools. Besides, the other recognized holidays and feast-days remain free. . . .

"2. The length and time of the various vacations for all types of schools within the province or smaller units are determined uniformly by the president of the province, in connection with the Provincial School Board and the administrative county board."

<sup>1</sup> *Min. Erl. vom 24 August, 1892.*

<sup>2</sup> *Zentralblatt, 1913, p. 826.*

## CHAPTER VI

### SCHOOL MANAGEMENT

SCHOOL deputations, as a rule, issue regulations governing the general management of the elementary schools. These regulations are much the same in all large German cities, although the hours of beginning and closing, morning and afternoon sessions, and the like, vary according to local conditions. In the discussion of the management of the schools, it will be noticed that practically nothing is left to the discretion or decision of the principal or his teachers, who have merely to follow the rules laid down for them. To an American it is scarcely conceivable to what extent even the minutest details of school management are regulated by the higher authorities. It must be recognized, however, that the duties and responsibilities of the teachers are in this way reduced to a minimum, thus permitting the teacher to give the greatest amount of thought and attention to the actual business of instruction.

The majority of *Volksschulen* have a morning session only, though there are very few school systems which do not have some few classes in the afternoon. There are, of course, a great number of schools which have both a morning and an afternoon session, but it is invariably true that all of the difficult work is arranged for the morning hours, the easier subjects, such as drawing, music, sewing, and physical training, being placed in the afternoon schedule.

In the winter semester, from October to April, schools having only a morning session begin generally at eight o'clock, and all classes are finished by one o'clock. This does not mean, however, that all the pupils come at eight in the morning, for the



little children of the lower section often come at nine or ten o'clock, and are excused sometimes at twelve, sometimes at one, all depending upon the arrangement of the weekly schedule. The pupils of the upper sections may come at nine on one or two days in the week, or may be excused at twelve, if they have work in the afternoon. In general, the children are free in the afternoon.

Hours of  
Beginning  
and Closing  
One-  
Session  
Schools

Eight o'clock seems a very early hour to begin school for little children, especially in northern Germany, where the winter days are extremely short and generally very dark and dull. Frequently school begins in the morning with lights, for without them it is impossible to distinguish the children across the room. Many of the little fellows seem half asleep during the first recitation, and it is no wonder, for they have come to school when the street lamps are still burning and there is scarcely a sign of day.

In the cities where there are morning and afternoon sessions, schools usually begin at eight o'clock and continue until twelve, while the afternoon session lasts from two until four o'clock. The children of the lower section rarely have classes in the afternoon even in the double session schools.

Two-  
Session  
Schools

During the summer semester the schools commence even earlier, the classes for the upper sections beginning at seven o'clock in the morning and remaining until twelve and sometimes one o'clock. The lower section does not come until eight or nine. In some country schools, instruction begins as early as six o'clock in order that the larger pupils may be through with their work by ten or eleven, and thus be enabled to help the rest of the day in the fields.

The following regulations<sup>1</sup> indicate the manner in which the children are supposed to conduct themselves in going to and from school and while they are there:

Conduct of  
the Pupils  
to and from  
School

<sup>1</sup> *Hildesheimer Schulordnung.*

"1. . . . By the time the bell stops ringing all pupils must be assembled in their respective classrooms.

"2. The schoolhouses are opened a quarter of an hour before the beginning of school. The children go immediately to their rooms and take their seats. Loitering in front of the building, in the yard, or in the corridors before the beginning of instruction is not permitted. The children must move quietly and decorously inside the school building, all sorts of running or noise on the stairs, in the corridors, or classroom being strictly forbidden.

"3. The signal for the close of school is given by a bell. The children leave the rooms and building quietly and in order. They are to refrain from any kind of misbehavior on the way to or from school, and, especially, it is forbidden them to run recklessly along the streets, or to block the sidewalks by walking in groups."

There is considerable tardiness in the German *Volksschulen*, but no attention is given to it except when it becomes chronic with a pupil. In many cases tardinesses are not even recorded, and the pupil frequently escapes without a reprimand. Tardiness, in any specific chronic case, is treated as an unexcused absence, and this probably accounts for the fact that not many children are habitually tardy, because the compulsory attendance law is rigidly enforced.

The discipline is very severe in some respects, but in general the behavior of the children in the classroom is not any better than in the American schools, and in some particulars not so good. Naturally, the discipline varies with the personality of the teacher. One might have the impression that the *Volksschulen* are disciplined on a military basis, but the very reverse is the impression one brings away after a visit.

Whispering is universal; indeed, no attempt is made to stop it, for the teachers sanction it, except when they themselves are talking, and then it is very seldom one sees a child whisper. As soon, however, as the teacher stops speaking, there is usually a great deal of communication among the pupils, which sometimes amounts to disorder.

The pupils, in their attitude toward and relations to the teacher, are always deferential on the surface, although as soon as the teacher's back is turned, one often sees smirks and faces which are far from respectful. The pupils are never openly impudent, except perhaps in facial expression, and they never utter a disrespectful word.

Relations of  
Pupils to  
Teachers

When a teacher enters a room, the children must rise, and remain standing until the teacher leaves the room, or until they are given permission to be seated, in case the teacher remains in the room. The pupil must also stand when he is addressed by the teacher. When a girl wishes to speak to her teacher, at the desk or in the hallway, she must drop a *curtsy* before beginning to speak, and another when the conversation is closed. The boy in a similar case must make a very deep bow. On the street the children greet their teachers in the same manner. When a boy is speaking to his teacher he must always stand erect with his heels together and his hands at his side. It is a sign of ill breeding for a boy to address his elders with his hands in his pockets, and German teachers never fail to remind the youngster of any such shortcoming.

The children in general are afraid of their teachers, for the German teacher is very dignified and authoritative. The pupils are always kept at a good distance and thoroughly impressed with the dignity and superiority of their teachers. They are frequently so afraid that they cannot recite freely or feel at ease in the presence of their teachers. This attitude of subjection on the part of the children is not always obtained by a mere show of dignity, but in far too many cases by shouts and blows.

It is an almost universal characteristic of the German teacher to talk very loudly, and to yell when excited; then, if shouts do not bring the desired results, to use his hand or the rod. One would not believe a person could so far forget himself as to yell at children, but when we say yell, we use it advisedly, for the

teacher uses every bit of lung power he possesses. While on the fourth floor, we have frequently heard recitations being held on the first. It must not be inferred that all German teachers so conduct themselves, but it is safe to say that half of them have the habit of frightening their pupils by shouting at them.

Corporal punishment is not forbidden, and is rather widely practiced. "School discipline must never be so severe as to amount to mistreatment which can be injurious in the slightest way to the health of the pupils."<sup>1</sup> A teacher may be fined or imprisoned, or both, for doing bodily injury to a pupil. Cases of bodily injury are very rare indeed, and in general there is a movement in Germany to do away with all severe forms of corporal punishment.

The rod or ruler is still used in a great many schools. In fact this means of persuasion is very frequently in plain view in the classrooms. Whipping is rather rare in cities, but the country teachers resort to it very frequently. We saw one boy whipped in a hallway before all the children, although we have been told that whipping is generally done in private.

Slapping children is very general. Not all the teachers do it, but a large number of them are accustomed to the practice. The slaps are not reserved for the boys alone, for the girls also receive their share. We recall several instances where three or four children were crying at one time, because they had been slapped or yelled at. It is safe to say that conditions were no better when there were no visitors.

There are other forms of punishment, all of which are known to American teachers, such as standing children in corners, standing up for an hour, staying in after school, and the like. Teachers are permitted to keep pupils after school, provided they remain with their pupils and supervise their work. Sitting

<sup>1</sup> *Allgemeines Landrecht*. Part II, Chap. 12, Sec. 50. Also *Kabinetts Ordre vom 14 Mai, 1825*. Found in Heinze: *Im Amt*, p. 213.

after school is generally limited to one hour. This form of discipline is not greatly favored by the teachers, inasmuch as it entails a hardship upon the instructor himself.

There is a rest period or recess after every recitation. Thus in a morning session of five periods, there would be four recesses, five minutes generally after the first period, twenty after the second, ten after the third, and twenty again after the fourth. Frequent recesses are necessary because of the length of the recitations, and because the children have no study periods at school.

The short rests are used for airing the rooms and for giving the children a chance to move around either in their classes or in the court, not at all for play. The long recess in the middle of the morning, either at nine or at ten o'clock, is used for the second breakfast. Each child brings with him a piece of bread and butter, with cheese or meat, to be eaten during this recess. If the weather permits, all the children go out to the playground and eat their breakfast. They walk around four or five abreast under the supervision of their teachers, never breaking ranks except to get a drink of water or to go to the toilet.

It is peculiar that this mid-morning promenade is common to all schools in Germany, and the direction is always counter-clockwise. To walk the other way would be a thing unheard of. Two American boys once caused a riot in a higher school by insisting on walking in the other direction.

There is something to be said in favor of recess periods without play. If children play hard for fifteen minutes, the recitation which follows must suffer, because the children are warm, tired, and in no frame of mind to concentrate on school work. Recesses seem to make no break at all in the work in German schools, and it is no doubt owing to the fact that the children rest during these periods.

The German child is never out of the eye of some teacher from the time school begins until it closes. Wherever children are, **Supervision by Teachers** there is always a teacher whose business it is to watch over them. At recess periods, stairways, halls, and all parts of the building are assigned to different teachers who must see that the children behave properly and that no accidents occur. The same teacher is not always on duty, of course, for this work of supervision is divided among the several teachers, and it alternates from day to day. One reason for this strict supervision is that the teachers are liable for damages in case children are injured, and it can be proved that no teacher was on duty.

The following regulations serve to show how minutely the management of the school is prescribed:<sup>1</sup>

**Instruction** 16. Instruction is begun and closed every day with song or prayer. The teachers must be very prompt with the beginning and close of work.

17. Interruption (visits from parents or other persons) are to be avoided as far as possible. Also correction-work, filling out of cards and lists (in so far as information is not required of the pupils) and other work, which would shorten the recitation time, must not be done during the recitation time.

18. Home work is to be divided up among the different days of the week according to such a plan that any sort of overloading be avoided. Home work must not be assigned in the morning for the same afternoon. Home work for the lower section may require one half hour daily, an hour for the middle section, and an hour and a half for the upper section.

20. The promotions, which take place every Easter, are discussed in special conferences under the direction of the principal and with the assistance of all teachers of the class, as well as of the teacher of the class higher, to which the class in question is promoted. In doubtful cases the principal decides after careful examination. As a rule children shall not remain longer than two years in a class.

21. Every half-year, at Easter and Michaelmas, each child receives a

<sup>1</sup> *Hildesheimer Schulordnung*, 1910.

report-card, which must be signed by the parent or guardian and returned to the class-teacher on the first day after the vacation.

22. Every class-teacher must keep the following records for purposes of administration and instruction:

- (a) A roll of his class with the vocation and address of the parents.
- (b) An absentee list, in which cases of absence and tardiness are noted.
- (c) A course of study, whose regulations serve as a standard for every teacher.
- (d) An outline of work to be taken up, which must be prepared before the beginning of each half-year.
- (e) A report (*Lehrbericht*), in which the work finished during the week must be noted.
- (f) A record, in which every half-year the marks for attendance, conduct, industry, order, and proficiency in all the different school subjects must be registered. In columns designated "Remarks," the necessary information concerning the reasons and date of withdrawal of children must be recorded.
- (g) A record for punishments and fines (*Strafverzeichniss*).
- (h) A daily schedule and inventory of school property in the room. Both of these must be hung up in the room.
- (i) A record of school equipment.

23. School attendance is to be taken every day, after the end of the first period. In registration of absences the teacher uses the prescribed designations.

24. Sickness always excuses absences, but such cases must be reported to the class-teacher by word of mouth or by letter at the latest on the second day of absence. The teacher may require a doctor's certificate in regard to the length and nature of the illness.

25. A leave of absence, which must be obtained in advance, is required for all other absences. Such leave is granted by the teacher for not more than three days, by the principal up to fourteen days, and for a longer time by the *Stadtschulinspektor*.

26. If circumstances make it impossible in especially urgent cases to obtain the leave of absence in advance, it must be obtained immediately after the first day of absence and the reasons therefor must be presented at this time. At all events the parents must be accustomed to asking for leave of absence only in case of necessity.

27. If the parents or their representatives neglect to obtain the leave or fail to give notice of cases of illness, such absences shall be considered as unexcused, and shall be treated as such.

28. Continued tardiness of pupils will be considered as unexcused absences, in case the fault is the parent's and the teacher's warnings have had no effect.

29. Just as soon as the breaking out of a contagious disease (cholera, dysentery, measles, rash, scarlet fever, diphtheria, smallpox, spotted fever, intermittent fever, typhoid, contagious inflammation of the eyes, itch, and whooping cough) is ascertained by the doctor in a household whose children attend the *Volksschule*, the parents or their representatives are obliged to inform the principal thereof as soon as possible, along with the doctor's certificate as to the nature of the disease. Children who suffer from one of the diseases named above are excluded from school. Well children in the same household are also excluded, if in their house there is a case of one of the first nine diseases mentioned. It must be officially certified by the doctor that the children are sufficiently protected from danger by isolation. Children who have been excluded from school for reasons mentioned above are admitted again only when the doctor certifies that the danger of contagion is past, or the customary time for the course of the disease has elapsed. Six weeks is considered the regular duration of scarlet fever and smallpox; four weeks for measles and rash.

30. Unexcused absences are transferred from the absentee list on the first and fifteenth of every month and handed to the principal.

31. Withdrawal from school is allowed ordinarily only at the close of each half year, Easter and Michaelmas. In order that the names may be struck from the school roll, parents are required to inform the principal of the intended withdrawal several days before the close of the term. The principal gives the parents a certificate of dismissal and the teachers are notified of the withdrawals. The enrollment certificate is presented at the time of withdrawal.

32. The transfer of children in the *Volksschule* from one school ward in the city to another is allowed only at the beginning of the half-year, and then only in case the parents have moved to another ward. Still in order to bring about an equalization of overcrowded classes in the different schools, a transfer of children may be arranged by the principals, with the consent of the city school inspector. The request of parents for transfer is to be laid before the principal of the



old school, and the request for enrollment in the new school is laid before the principal of the latter. In both cases the old enrollment certificate is presented.

For the purpose of keeping watch over school attendance, the principal of the school which the child leaves must inform the principal of the new school of the transfer immediately.

All the foregoing details show to what extent the real management of the school has been removed from the hands of the teachers. The most that can be said in favor of such a system is that it works well. Teachers know precisely **Conclusion** what is expected of them; there is no shifting of responsibility; and the school runs without any friction, thus allowing the teachers to devote themselves entirely to the business of teaching.

## CHAPTER VII

### SCHOOL HYGIENE

THE medical and sanitary control of all *Volksschulen*, middle schools, and higher girls' schools is in the hands of the district School Physicians. These physicians must inspect the sanitary and health conditions of every school in the district, alternately in summer and winter, at least once in every five years. Under their supervision come matters relating to school architecture, size of rooms, ventilation, lighting, heating, cleaning, seating, toilets, playgrounds, gymnasiums, drinking arrangements, as well as the health conditions of the individual pupils.<sup>1</sup> This inspection is not very frequent, but in most places each school has local inspection by a doctor, and the teacher is also instructed how to proceed in cases of obvious illness or poor health. In the large cities, and in smaller ones, too, one finds school doctors assigned to particular schools. It is these physicians who have most to do with the matter of hygiene in the *Volksschulen*.

It is the school physician's duty to examine each child upon the child's entrance in school as to his mental and physical condition. Children who are deficient in any way are kept under the strict supervision of the doctor and the teacher. Such examinations are always conducted in the presence of the children's parents. The doctor must inspect the school at least twice every half year and acquaint himself with the hygienic conditions of the school and of the children, especially of those children who have been under medical care.

Duties of  
School  
Doctor

<sup>1</sup>Art. 94, *Dienstanweisung für die Kreisärzte vom 23. März, 1901.*

The school doctor is not allowed to treat the children whom he has examined.

The Germans act very promptly in all cases of sickness of contagious character which appear in any community and particularly in the schools. A child who has the faintest symptom of an illness is examined immediately and is quarantined, if the disease proves to be contagious. There are very definite regulations governing the isolation period of such diseases as measles, smallpox, scarlet fever, and typhoid fever. In cases of epidemic the principal can close his school without permission from any higher authority.

Closing of  
Schools  
during  
Epidemics

Every German child must be vaccinated for the first time before his second birthday, and every pupil of all public and private schools must submit himself to a second vaccination during his twelfth year. The records of vaccination are kept by the police, so no one has the least chance of escape, not only for this reason, but also because the vaccination certificate is demanded of German citizens very frequently. This certificate is always one of the required documents before all civil service examinations. By strict use of vaccination smallpox has become a very rare disease in Germany. The cases that do occur are generally brought in by persons coming from some of Germany's less sanitary neighbors.

Vaccination

There is a great movement under way now in all Germany for temperance. No one thinks of prohibition, although there are a very large number of Germans who do not drink alcoholic beverages at all. Drunkenness is much less common in Germany than in any other European country, unless we except Turkey. The schools and private societies are carrying on a vigorous campaign against drunkenness and the excessive use of alcoholic beverages. Time is taken both in nature study and in physiology to show the evil effects of too much

Alcoholism

alcohol upon the human body, and upon the economic condition of the family in which drunkenness is prevalent. Children of school age are generally allowed only a moderate use of beer and a little wine occasionally. There are many parents, however, who, though they may use beer and wine themselves, do not permit their younger children to do so. Instruction in school concerning alcohol is never carried to the fanatical extremes that it is sometimes in this country.

The most vigorous health campaign in Germany concerns itself with tuberculosis and diseases of the respiratory tract, all of which diseases are extremely prevalent. First of all, school children are brought up not to expectorate on the sidewalks, in public buildings, and on the floor. The German people have been educated away from promiscuous expectoration, and in this one respect we Americans can learn an important lesson from them. Training in the schools is largely responsible for this German virtue. Every schoolroom, every stairway, and every corridor has a spittoon in which there is water. This receptacle is emptied every day. Both teachers and pupils must use the spittoons for purposes of expectoration; especially is this regulation to be enforced with regard to children who have a cough. With reference to the injuriousness of collection of dust, attention must be given that the regulations having to do with the removal of dust from rooms by some damp substance are rigidly enforced.<sup>1</sup>

Not only are precautions taken against dust and spitting in the schools, but ample provision is made for those children who need attention for tubercular troubles. In almost every town there is a free clinic or provision for examination for children and persons who believe themselves to be afflicted in any way by tuberculosis. There are also a great many homes and free hospitals, supported both by state,

Tubercu-  
losis  
Clinics

<sup>1</sup> *Verfügung von der Regierung zu Düsseldorf, 1891.*

city, and private funds, for the treatment of tubercular cases. (See p. 147 ff.)

It is the ordinary practice in Germany to locate the school as near the middle of the school district as possible. In the cities the schools are located most frequently on streets which do not have much traffic and where there is as little noise as possible. In this respect a great many schools we have visited were not successful, due most often to the fact that the pavement was generally of cobblestones and hence extremely noisy. In some cities where asphalt was used there was little or no noise about the schools. Sometimes heavy trucks and carts are not allowed to drive near schoolhouses during school hours. In the country schoolhouses are invariably located in villages, never out in the open fields as is common in America.

The school site is always selected with light and drainage in mind. Sites are avoided where there are lakes or graveyards which might in any way pollute the drinking water supply. Likewise schools are never placed close to factories, which through noise, smoke, odors, or dust could militate against the sanitary conditions of the school.

The school site is always large enough to accommodate all the buildings, including the schoolhouse, the well, the toilets, and storehouse. A playground must also be provided. As a rule the playground is large enough to give each child three (3) square meters of space and in no case must less than one and five tenths square meters be provided. All the school buildings must be so placed on the site that buildings erected on neighboring property cannot interfere with the light and ventilation of the school. All school building walls, the windows of which are used for light for schoolrooms, must be at least eight meters distant from any neighboring building. We could find no general practice when it came to the direction the building should face, but

Position of  
Building  
Site

Character  
of Site

the windows ordinarily got their light from the south and the west.

The one-class school is the rule in rural sections of Germany. It is customary that the school building in small towns and villages have several rooms for the teachers in addition to the recitation room or rooms. One finds all sorts of combinations of schoolrooms and lodgings. A Rural School-houses one-class school ordinarily has three or four rooms for a married teacher's lodging, in addition to storerooms and a kitchen. The unmarried teacher receives a less spacious lodging. The entrance to the teacher's lodging is separate from that used by the children. In four or five room country schools there are sometimes lodgings for all teachers, then again for only a part of them.

The width of the hallways is generally rather great in order to accommodate the children at recess time in rainy weather, when the hallways are used for exercising. This is especially true of the newer buildings. If the hall leads to several rooms, it is generally two and a half (2.5) meters wide. Hallway

The size of the room, with reference to floor space, depends upon the number, arrangement, and size of each desk, the aisles, and the position of the door and of the stove, if there be one. Ordinarily in a one-class school there cannot be more than eighty children in a room, and in a school with more than one room, not more than seventy pupils are allowed to each room. The commonest dimensions of the modern German schoolroom are 9 meters long by 6 meters wide by 4 meters high, or about 216 cubic meters of air space. The space allowed each seat is about .5 meter by .7 meter. The room's dimensions are ordinarily painted on the wall for use in arithmetic. Such rooms are supposed to accommodate about fifty children, but one usually finds a larger number than that. Rooms of these Size of Rooms

standard dimensions are found in the modern buildings, while rooms of any size and description are common in all of the older structures. The country schoolrooms are as varied as they are in America.

The first row of seats is at least 1.7 meters from the front wall; the last row at least .3 meter from the rear wall; the space between seats and the window wall at least .4 meter; the middle aisles are at least .5 meter in **Open Space** width; the space between the seats and the window wall is at least .6 meter. The teacher's desk is ordinarily placed so as to give a good view of the children and the door. The stove is generally near the wall opposite the windows. The minimum distance between the stove and the nearest seat is .8 meter.

By far the larger number of schoolrooms in Germany are 4 meters in height; the minimum is 3.20 meters. The height of the schoolroom must be such that each child shall **Height of Room** have at least 2.5 cubic meters of air space. The distance from the top of the window to the floor must be at least one half the width of the room. These regulations are observed with very few exceptions.

The lighting system in all modern German schools is unilateral, and in a great many of the buildings constructed as much as forty or fifty years ago. The total window **Lighting** surface must in general equal one fifth, and in some cases one sixth, of the total floor space of the room. The left side wall is usually the source of light. The distance between windows is never more than 1.2 meters. The window sill is never less than one meter in height, and the windows reach as near the ceiling as possible. Rooms getting light from the north ordinarily have windows in the rear of the room, but such window space is not reckoned with the north windows in getting the proper proportion of window space.

The percentage of school children in the *Volksschule* who have weak eyes is very large. We have been unable to ascertain the cause, inasmuch as the lighting of the school buildings is scientifically correct and the amount of home work is rather small. It is our opinion that poor food, poor ventilation in the school, and poor lighting in the home are largely the causes of the great number of children who wear glasses and have weak eyes. The teachers are always careful to seat the children with poor eyesight as near the front of the room as possible. The community very often provides free optical treatment for poor children and even provides glasses if necessary.

Practically all German schoolrooms are provided with artificial light. This is necessary in Germany because of the abnormally great number of cloudy, foggy days in winter, especially in northern Germany. During the winter months daylight comes very late in the morning and dusk comes very early in the afternoon. We remember that frequently on winter mornings we were unable to recognize children whom we passed on the way to school owing to the darkness. It was also common to burn the lights in the schoolrooms for over an hour after the opening of school and sometimes all day long. Not only is the lighting problem made difficult on account of the shortness of the day, but also because of the extreme cloudiness which prevails in Germany in winter. In Berlin from the first of October to the first of April there are rarely ever more than three hundred hours of sunshine. These facts may have something to do with the prevalence of poor eyes among the Germans.

The walls and ceilings are generally painted or treated with a preparation that will not come off easily. The walls are usually light, greenish gray, light gray, or light green. Sometimes a somewhat darker color is used on the lower part of the walls. This panel is generally four or five feet high.



In other cases wood or beaver board is used as wainscoting. The ceiling is usually white. These are the conditions in the better schools. In a very large number of schools the walls are a very dingy, unattractive gray, and are often none too clean.

The blackboard on all sides of the room in German schools is practically unknown. There is always a blackboard on part of the front wall. (See p. 44.) The teachers do not seem to see the advantage of much blackboard space. This is due to the method in teaching. In the *Arbeitsschule* at Dortmund, where the children did a large part of the work, the teachers felt the need of more board space, and they were using crayon on the bare painted walls. They knew what they needed, but could not get it.

One of the worst features in the German schoolhouses, except in the new ones, are the floors. They are usually made of flooring five or six inches in width. Boards of such width have a tendency to warp and leave cracks which serve <sup>Floors</sup> for accumulation of dirt and dust. The floors are often very rough and tend to splinter badly. These conditions are very prevalent in rural communities and in older buildings of the cities. In the more modern school structures there is a tendency to do away entirely with wood as flooring material, particularly in the halls. A heavy composition flooring, a kind of linoleum, is widely used. Hardwood floors are also very popular and are treated generally with linseed oil and shellac. The linoleum floor is perhaps not so durable as the wood, but can be cleaned easily, and is warm and noiseless.

The ventilation is the worst sanitary feature of the German *Volksschulen*. The German is dreadfully afraid of a draft. He desires lots of fresh air while he is outside, but <sup>Heating and Ventilation</sup> once inside the windows are usually kept closed. There are only a comparatively few schools in Germany in which the ventilating system is organically connected with the heating system. In the country schools, stoves are the uni-

versal method of heating and the ventilation is entirely by means of windows. Without exception, unless on days when there is no heat needed and the windows are all open, the air is extremely bad in German country schools. Many days we have suffered headache and nausea from being compelled to sit in rooms that were unventilated. Sometimes there was a little air hole at the top of the room and one at the bottom, but these were usually closed. In all schools the windows were always thrown open between classes, that is, once every hour, and the rooms were thus filled with fresh air. As soon as the classes reassembled, however, everything was usually shut up tight and in ten minutes the air was almost as bad as before. In every room there are instructions dealing with the regulation of the windows and air holes, but in the main these regulations are disregarded. Tilted window panes are rather common in the schools, by use of which fresh air can be obtained without causing a direct draft on a child sitting next the window. We may have been unfortunate in our schools, but of the several hundred visited we did not find one in which there was a forced draft system of ventilation. The gravity system of ventilation is used in quite a number of schools, but these are only a small percentage of the total number. The reason for a great deal of the poor ventilation is that it saves coal and fuel to use vitiated air, while fresh, warm air costs a large amount in cold weather.

There is another reason for bad air in German *Volksschulen* which would be apparent only to one who has to endure it and wonder about the causes. To have pure air the children must be clean. In the rural sections of the Empire and in river districts there are a great many people who know nothing whatever about personal cleanliness when it comes to baths. Some of the children bathe once a week, but most of them bathe once a month and some not at all. The outer clothing of a great many children is none too clean. A great many

children bring lunches to school which consist of cheese and *Wurst*. These are some of the contributing elements in the bad air so prevalent in German schools.

Every schoolroom has a thermometer hung about five feet from the floor on the wall opposite the windows. A temperature of  $18^{\circ}$  C. ( $65^{\circ}$  F.) is maintained. In the newer schools the thermometer is in an opening in the wall next the corridor so that it can be seen by the janitor without entering the room.

Fully eighty per cent of the schoolrooms of Germany are heated by stoves. The remainder are heated by steam, hot air, or hot water. Ordinarily one never sees an iron stove in the schoolroom, but generally the large tile stoves, which are much better adapted for the purpose, because they maintain a very constant heat and are less expensive. These stoves are made of tile, are about ten or twelve feet high, and about three feet square. Once such a stove gets warm, it stays warm for a long time, and the temperature is very even.

The seating arrangements in most German schools are generally poor. Very few rooms are provided with individual seats. In the higher grades there are generally two or four children at one desk, but very frequently eight in the lower grades. In most instances the back of the seat is perfectly straight and the seat is at right angles to it and so narrow that it supports about half of the leg between the knee and hip. The tops of the desks are in the main satisfactory. Very few of the seats can be raised. The seats which accommodate four or more are all in one piece and are just a bench with the desk top in front. It can easily be seen how difficult it is for the boy on the inside of such seats to get out. To do so he must climb over three or four boys. It is not only inconvenient, but it takes lots of time. On account of not being able to raise the seat, the children on the inside seats can never stand straight while

reciting. There are a great many patent desks in Germany, but school boards are loath to spend money for them. It was not our good fortune to see one single room in the German schools which was at all satisfactory with regard to seats. We have been told of rooms which were well seated and have no reason to believe that such is not the case, but such rooms are exceedingly rare.

The recitations in the *Volksschule* are as a rule forty-five to fifty-five minutes in length. In the lower classes, although the recitation period is fifty minutes in length, the character of the work is changed every ten or fifteen minutes so that the children do not become very tired. In the upper classes the whole time is usually taken up with one subject. There is a recess period between each recitation varying from five to twenty minutes. No violent exercise is allowed during recess periods, and the children come back to the next recitation really refreshed. There are no study periods in the *Volksschulen*, where there is a teacher for each class. This necessitates constant recitation periods throughout the school day. Since a large part of the work calls for close attention and much memorization, the pupil is under a considerable strain after four or five hours of such work and shows signs of physical fatigue. The lower section has 20-22 hours' work a week, the middle section 28-30 hours, and the upper section 30-32 hours. From the two upper sections this means five hours a day for six days, but since there is no school on Saturday and Wednesday afternoons, it puts more than five hours' work on some days.

In summer, that is from Easter until after the October vacation, school begins at seven A.M. in the majority of communities and is all over by twelve or one o'clock, while in winter the schedule is just one hour later. Some country schools begin in summer as early as six o'clock in the morning for the larger children, who may be needed for

Hygiene of  
Instruction

Length of  
Day

Hours of  
Beginning  
and Closing

help in the harvest fields. These children are excused at ten or eleven o'clock. The little children rarely ever come at seven o'clock, but generally at eight or nine. The beginning hour in many cases seemed very early to the writer. During the first recitation the little children were so sleepy that they did little else than yawn. The afternoons are free for the majority of children. If there is an afternoon session, there are always two hours between that and the morning session. Subjects such as drawing, manual training, and physical training are put on the afternoon schedule.

When the temperature in the shade reaches  $77^{\circ}$  F. ( $25^{\circ}$  C.) by ten A.M. the schools are dismissed for the remainder of the day. The temperature rarely goes above that mark. Heat Vacations

The German teacher gives particular attention to the position which the child assumes in the schoolroom. Lounging in seats is absolutely never seen, and when the child stands to recite, he stands as straight as he possibly can. He keeps his shoulders back, his chest out, and his hands by his side. The military spirit which pervades Germany may have something to do with the correct physical attitude in the classroom. At times the children appear almost too stiff, but even that is preferable to careless physical posture. Position during Recitation

The teaching methods employed in the *Volksschulen* bring it about that much home work is not required. The children in the lower section have practically none; the middle and upper sections rarely have more than a half or three quarters of an hour. The home work that is done is always easy, either solving problems which have been explained in class as far as the methods are concerned, or in writing short essays the subject matter of which has been thoroughly discussed in class. Home Work

American children ordinarily have a great load of books to carry to and from school every day. This custom often leads to evil effects on the spine and shoulders, since the children usually carry them under the arm, and generally under the same arm. The German child never has as many books as the American child, and almost without exception he carries them in a satchel on his back held in position by straps which go over the shoulders and under the arms. This seems a much better way to carry books, and all dangers of lateral curvature of the spine are avoided.

The hygiene of the special subjects of instruction is mentioned in the respective chapters. The study of hygiene itself is treated in a separate chapter, as are such topics as swimming, recreation centers, free food, and the like.

The average sanitary condition of the German schools is far above that of the American school, but in no case are the conditions as good as in our best schools. In matters pertaining to seating and ventilation the German schools are distinctly inferior; toilet facilities are poor; and heating systems are bad in at least sixty per cent of the schools. In other respects the German schools are rather satisfactory. As far as sanitary theory is concerned, the Germans are preëminent, but practice lags far behind on account of lack of funds.

## CHAPTER VIII

### EXTRACURRICULAR AND BENEVOLENT ACTIVITY

ONE would get a very false impression of the forces at work toward the education and uplift of the lower classes in Germany, if one thought that the *Volksschule* were the only such force worthy of consideration. Sometimes we are led to believe that the *Volksschule* may not be even the most important, but such a statement could not be proven and would be very rash. In order, however, that one may better understand the function and place of the *Volksschule*, it seems necessary to mention a few of the extracurricular and benevolent activities which vitally affect the lives of those who receive their formal education in the *Volksschulen*.

The continuation school system in Prussia and in other states of the Empire is a very potent factor in the life of the lower classes. More and more the continuation school is becoming responsible for the vocational training Continuation Schools of the young, both boys and girls, between the ages of fourteen and seventeen. There are continuation schools of many types. Some of them are the general, in which merely the subjects of the *Volksschule* are continued, the industrial, the commercial, the agricultural, and the domestic science. As the reader will notice, the courses of study in the *Volksschulen* contain very little that is technical or that can directly be applied in pursuit of a trade or calling, and it is purposely so. In order to prepare the youth of the land for their future work, opportunity is given in the continuation school during the time

of apprenticeship for the acquirement of both theoretical and practical knowledge along many lines of endeavor. In Berlin, to boys between fourteen and seventeen, in 1914, there were open one hundred and eight different courses for as many different pursuits. There were also a great many trade courses for girls. In some places attendance is voluntary, but in the majority of places, both in the city and in the country, children on leaving the *Volksschule* at fourteen are required to report immediately to the continuation school to prepare for their vocations. These schools are only part-time schools, and the hours are late in the afternoon or evening, so that the pupils may be working and attending school at the same time. Employers are required to give their apprentices time off in which to attend school. Thus the education of the child in the majority of places in Germany is provided and compulsory from the age of six to seventeen. These continuation or trade schools are the schools which prepare the apprentices to become journeymen and the schools which prepare the young men for entrance to the middle technical schools. The boys who are apprentices in shoemaking, carpentry, goldsmithing, printing, and the like must attend the continuation schools.

The more efficient and ambitious apprentice at the age of seventeen leaves the continuation and is free to enter a technical or trade school of the middle class, which he may attend, if he will, for two or three years. Such schools are for forestry, gardening, cabinet and furniture making, jewelry, printing, book making, and many other trades. In these schools he becomes a master workman.

Thus it is seen that the boy is provided for from the age of six until seventeen, and if he wishes, until twenty in different types of schools. During all the formulative period the state keeps its watch over him, guides his actions, and controls his thinking. The ordinary boy is free from school at seventeen,

Middle  
Technical  
and Trade  
Schools



and then comes the educative element which exerts more influence than any other save the *Volksschule*, — army service.

When the German lad enters upon his eighteenth year he is eligible to army service for two years. This has no reference to those boys who attend the higher (secondary) Army  
Service schools. About one half of the youths of the country actually in times of peace serve. Some are physically unfit and some are "put back" for one reason or another. Those who are merely "put back" can be called out for training in time of war. We are particularly interested in the educative influence of two years in the army on the youth of the country.

In the first place, the army service is generally conceded to be the most severe test and course of training that could well be devised. Any man who can stand two years' training in the German army need have no fears as to his physical stamina. The service is about as near actual warfare as could be imagined as regards rigor of discipline and physical activity. The men are put through long and trying physical exercises, marching, drilling, and gymnastics. No matter what the other advantages and disadvantages may be, there is no room for doubt as to the very definite physical benefit derived by the men who serve.

The spiritual effect is even more noticeable and is more lasting than the physical. The rigid discipline of army service makes the man responsive to commands, obedient to authority, crushes individuality, and accustoms him to action in groups. Physical obedience reflects on the psychical reactions. These are the less tangible effects of military training. Service in the army makes most of the men patriotic and proud of the machine of which they are a part. It inspires them to see the army in action during maneuvers; it impresses them with Germany's power to know that two or three million men can be mobilized in six or eight hours, and five or six million within a week. Aside from these results derived from military service the men receive

a great deal of actual class instruction from their officers concerning military tactics, machine construction and repairing, building roads, bridges, telegraph and telephone lines, aëroplanes, boats, and all phases of activities which are connected with the German military machine. The German army is a school, which is the capsheaf of the great educational system which turns out "God-fearing, patriotic, self-supporting subjects of imperial Germany."

From the national point of view *Jugendpflege* is a new movement. The term, best translated "youth welfare," denotes *Jugend-* a movement which takes care of the youth of the  
*pflege* country after the compulsory school period, between the ages of fourteen and seventeen or twenty.

There had been a great many local organizations prior to 1911 which were interested in the recreational life of boys and girls outside of school hours, but the movement, which was seen to have vast importance for the nation's welfare, lacked organization and system. Accordingly in 1911 the Minister of Education issued orders<sup>1</sup> with reference to a nationalization of the movement and promised government support to all movements, clubs, associations, which had at heart the welfare, spiritual and physical, of the boys and girls who had just left school and were employed in various occupations. The money to support such organizations is supplied by local, private, and public gifts and levies.

1. The purpose of the Youth Welfare movement is coöperation in the bringing up of happy, morally and physically efficient youth, filled with civic pride, fear of God and love for home and the Fatherland. It desires to support, supplement, and further the educational activity of the home, the school, the church, the employer, and the ruler.

**Aim**

3. The necessary means are provided by friends and patrons of the youth, by cities and districts, and in a supplementary way by the state.

<sup>1</sup>*Zentralblatt*, 1911, p. 345.

4. The care of the youth who have been excused from school attendance compasses the ages from fourteen until entrance into the army, or until twenty years of age. The younger three-year group will be divided, where possible, from the older three-year group.

The ministerial order goes ahead to explain why such a movement is necessary. On account of the economic and social conditions of a great many of the youth, little or no time or opportunity is afforded for their physical and recreational activities. A very large number of such boys, and girls too, devote all their spare time to aimless dissipation, and soon fall into evil habits. Something to do that is valuable is the only way to put that which is deleterious out of a child's life. Accordingly the Minister recommended some of the following means:<sup>1</sup>

7. Acquirement of rooms for the establishment of homes or clubs for gatherings of young boys and girls during periods of recreation and provision of opportunities for writing, reading, play, and other activities. Establishment of libraries for the youth. Evenings for music, lectures, reading and singing, theatrical productions, and especially provision for the right sort of socials and parties.

Use of opportunities offered in a locality for popular education, such as museums, with proper guidance and visiting of monuments and other historical, geographical, and scientific objects of interest.

Provision of manual training shops. Provision of playgrounds and covered rooms for physical exercises. . . . If possible free baths, swimming, and skating. General education in all sorts of physical activities according to season, locality, and opportunity. Besides gymnastics, games, walks and tours, also swimming, snowshoeing, skating, and coasting are to be recommended.

In addition to the activities already mentioned, teachers very often form classes in shorthand, German, history, or in any other subject which may be in demand.

The interest in the "Youth Welfare" movement has grown with great rapidity. Courses have been opened throughout

<sup>1</sup> *Zentralblatt*, 1911, p. 347.

Prussia for the preparation of leaders of boys' and girls' organizations. In 1913 over twenty-two thousand persons had voluntarily taken these courses. These volunteers  
**Teachers** come from all classes, chiefly from the class of elementary school teachers, but also from other callings, which shows the general interest in the work. The normal schools of Prussia are now preparing their teachers to take part in the movement and offer definite instruction to accomplish this end. This is generally done by organizing the youth of the community in which the normal school is located and by organizing similar activities within the normal school, the normal preparatory and practice school.

Some of the commoner activities of the "Youth Welfare" movement are as follows: school savings banks; use of a library;  
**Activities** games and contests for free afternoons; tours and excursions; war and cross-country games; skating, coasting, and snowshoeing; swimming; manual training; care of plants and gardening; classes in shorthand and writing; gymnastics; singing; excursions to industrial plants; social gatherings; parlor games; holiday celebrations.

*Jungdeutschland* (Young Germany) is an organization for boys with much the same purposes and characteristics as the  
**Jung-** Boy Scout organization in America and England,  
**deutschland** except that it is somewhat more highly organized. It is one of the activities allied with the "Youth Welfare" movement, except that *Jungdeutschland* is open to boys who are still in school and who usually come from the better classes of society. *Jungdeutschland* is an organization chiefly for the physical and moral betterment of its members for patriotic and national purposes. It is very military in organization and method and has for its head Field Marshal Freiherr von der Goltz, one of Germany's most noted and popular soldiers.

Such movements as have just been described are by no means

new to America, but in point of organization and general effectiveness the Germans excel us. Movements for the betterment of the youth in Germany have been nationalized, because the utmost importance of saving the next generation has been recognized in high places. In America all such movements are spasmodic, at best poorly organized, and open to only a small portion of our youth. Almost no provision is made here for training of proper leaders for the work outside of the Y.M.C.A. and the Boy Scouts.

There are other activities which demand the attention of the student of German schools. Among these the special schools for children are important. Reference has already been made to auxiliary classes for mentally deficient children in another chapter, and also as to the Mann-heim system and similar systems, which make provision for the brighter as well as the duller children. The number of children in auxiliary classes runs very high, and there are either schools or classes of this type in practically all German cities and towns of more than ten thousand population.

Courses for stammerers and stutterers among the children of the *Volksschulen* were first organized in Germany in a great many cities in the eighties of the nineteenth century. Minister von Gossler was particularly interested in this phase of education. Von Gossler took the stand that the organization of special classes for those who had defects of speech would not only take a great burden from the *Volksschulen*, but would also increase the value of such children as future workers in the state. Defects of speech would hinder the child in its trade or calling, therefore it was the state's unavoidable duty to do all it could for their improvement. From that time the number of courses has increased greatly. Teachers are especially trained for the work, and usually receive a higher salary than the regular classroom teacher. Gutz-

Schools for  
Abnormal  
Children

Courses for  
Children of  
Defective  
Speech

mann, director of the deaf and dumb school in Berlin, has done probably more than any other for the development of method in the instruction and cure of those afflicted with defective speech. It has been estimated that there are at least 100,000 children in the German Empire who are defective in speech. We are not able to obtain figures as to the exact number of courses in Germany, but we have visited such classes in Berlin, Breslau, Cassel, Dortmund, Hannover, Kiel, and Posen. The normal schools also instruct their students in the method of treating cases of stuttering and stammering, and also in measures to be taken to check incipient cases. This latter point is of importance inasmuch as many children form these habits after starting to school. Courses are also provided for children in the pre-school period in order that the total amount of stuttering and the like may be reduced.

There are special classes for partially deaf children, and also for those who are particularly weak-sighted. The latter type of class is very rare, as provision is generally made for such children by advantageous and careful seating in the regular school. In some few cities there are classes for crippled children for whose instructor the community pays in case the parents are unable to do so. The majority of cripples, however, are cared for in homes for crippled children. Special provision is also made for incorrigible and truant children in truant or parental schools, which most frequently assume the character of institutions.

There are also special schools and courses for normal children of the *Volksschule*. We have already mentioned cooking, sewing, and manual training schools and courses which are to be found in all of the large cities and in many of the lesser ones, and even in rural districts. These schools and courses are sometimes organically connected with the *Volksschulen* and sometimes are supported sep-

Special  
Schools for  
Normal  
Children

arately by private funds or associations, the city, or the state. It has also been necessary to establish courses in drawing for boys in addition to the drawing regularly given in the *Volksschule*. These classes are generally given in connection with a continuation school. Some schools give swimming in addition to the regular work in physical training. English and French are taught in the *Volksschulen* of a few cities, particularly in the great commercial cities and in cities on the western frontier which have a large French population.

Among the more important activities of benevolent character which deal with the children of the *Volksschulen* are children's day homes and vacation colonies. The day homes Benevolent  
Activities are intended for children of school age who need supervision and a warm place to stay during the hours when their parents are at work. In many families both the mother and the father are employed from early morning until seven or eight o'clock in the evening. Children of such families can scarcely remain at home and cannot be allowed to run the streets. Accordingly almost every town or city in Germany has established one or more of these homes for this class of children. The children remain in these homes from the time school is dismissed until the time their parents return from work. The children are employed in many ways and are always under the direction of some guide or leader, ordinarily a teacher. School lessons are prepared in this time. Games, sewing for the girls, manual training for the boys, gardening, knitting, patching, and the like are among some of the activities of these homes. It is customary in many places to serve the children with a light supper of bread and milk and some cold meat. Baths are frequently provided.

The vacation colonies (*Ferienkolonien*) are also for the poorer classes. It is their purpose to give the weak and physically undeveloped children of the poor opportunity in the summer and fall vacations for a few days in the open air, in the mountains,

in the country, or at the seashore. These colonies are supported partly by private and partly by public means. Sickly children are handled largely in three categories. Children who are ill with a definite disease are sent to children's sanitariums or hospitals. Children who through sickness or undernourishment are in a poor condition make up the inhabitants of the regular vacation colonies. The third group of children, who are in the first stages of decline, are looked after in the "city colonies" and milk stations.

In 1881 the "Association of Children's Sanitariums on the German Coast" was founded by Geheimrat Benecke, and to-day sanitariums are to be found in all of the important coast cities which provide free treatment for the children of the poor.

The real vacation colonies had their beginnings in Switzerland about forty years ago, when Pastor Bion of Zürich took the sickly poor children of that city out of their unhealthful and miserable homes up into the forests of the surrounding mountains. From there the movement spread to Germany, where it has grown to enormous proportions and is largely supported by municipalities and by the state.

The choice of children is usually made by the teacher after investigation of the conditions and needs of the home from which the child comes. Children from seven to fourteen years of age make up the majority of the total number. The expenses in the colonies are borne by the associations, while the parents are required to furnish the child's clothes. Bedclothing, towels, soap, combs, and books are provided by the association.

Although there is not as much destitution in Germany as in other continental countries, there are thousands of families who have only the barest necessities of life. The children of the poorer classes suffer not only from hunger but also from cold. In Berlin alone in the winter of 1913-1914 there were two hundred thousand unemployed.



Naturally the families of these men had to suffer. At best the morning breakfast of these families is very meager, consisting of a cup of coffee and possibly a piece of bread or a roll without butter. Thousands of children in the large cities come to school without a warm breakfast of any kind, and without any second breakfast in their satchel to still their hunger until lunch time. Many others can get no warm food at noon, perhaps only a piece of bread and a cup of coffee. Frequently when they get home they find the door shut and the father and mother at work, and they are compelled to play in the streets or go to a neighbor's house until their parents' return.

In practically all German cities there are associations similar to the ones that support the day homes, which take it upon themselves to furnish breakfasts and luncheons to the poor children who are unable to get proper food at home. The breakfast thus provided consists of warm milk and bread, while the luncheon consists of bread and some sort of nutritious soup. These associations are supported partly by private donations and partly by public funds. In many of the large cities the newer schools have special rooms set apart for feeding the children. The wife of the principal and the wives of the teachers usually exercise supervision over the meals and the management of the undertaking.

The number of children fed daily in Berlin, Munich, Cologne, Frankfurt, and Dresden amounts to three or four thousand in each city. The numbers increase from year to year. Some school men oppose the movement on the ground that the parents of children fed free of all cost come to depend on the public for the support of their children. Nevertheless the movement continues to grow.

We did not visit a city in Germany of any considerable size which did not have a dental clinic for its children. The treatment at these clinics is either free or costs about twenty-five

cents for the year. At the beginning of school the children are sold or given a dental card, and they are required to visit the clinic and have their teeth examined. An investigator found that out of ten thousand children only 4.3 per cent or 430 children had perfectly healthy teeth, and that fully half the teeth of all the children were in some way affected. The reason for such conditions is lack of care of the teeth. Only a few of the children take advantage of the free dental treatment, and fewer still ever learn to use a toothbrush. There is an enormous fortune in the manufacture of tooth-brushes in Germany, for the great mass of people is yet unacquainted with that article of personal toilet. The teachers mention the subject sometimes while teaching physiology and personal hygiene, but the results as yet are not noticeable.

Shower baths are the commonest kind of baths installed in the modern German school building. All the new schools and many of the older schools have shower baths. This is true in small towns as well as in the cities. Occasional provision is made for bathing in the country schools. A great deal of the bathing equipment is out of date. In most cases the shower is over a zinc tub, while rarely one finds the shower built in, with the drain in the floor. Some make provision for warm water, but this is not always the case. The time for bathing is usually taken out of the arithmetic hour, or it is after school and is supervised by the janitor. Bathing is not compulsory; however, the children in the upper classes generally learn to take advantage of their opportunity. Many principals in the larger cities have told me that the children make little use of the bath.

In some of the larger cities, like Munich, the baths occupy several rooms in the basements, where there are as many as fifty showers, an attendant's room, a laundry, and dressing rooms. Towels and soap are furnished by the city ordinarily,

but there are many exceptions to this rule, all depending upon the wealth of the city. In Munich from one half to three fourths of the children in the *Volksschulen* use the school baths. In most places the boys bathe much more frequently than the girls.

In cities where school baths are not provided it frequently occurs that children of the *Volksschule* are furnished cards free of charge to public baths and swimming pools. Germany is very rich in rivers and navigable streams, so that a very large portion of the population is near water that is deep enough for swimming. In case a city is on a river or the seacoast, one invariably finds public or municipal swimming and bathing accommodations, which are always open to the school children. Occasionally the children receive free swimming instruction. In a few cities swimming is made an integral part of the physical training course. Swimming contests are frequently held.

It is our observation that the German child does not play as much as the American child. It is, however, not on account of lack of facilities. Rather it is because of the *Municipal* method of training in the schools and of the *Playgrounds* discipline at home. All the large cities and many of the smaller ones have public parks and municipal playgrounds, the latter being devoted exclusively to children. We were unable to get any figures as to the numbers that use the playgrounds. Our judgment is based on personal observation of playgrounds in fifteen or twenty of Germany's largest cities. On most occasions these grounds were noticeably vacant. Sometimes there would be children on the grounds, but most often they would be occupying the benches under the trees. The children in the country who have no playgrounds do infinitely more playing.

There are at present movements in all Germany to increase the amount of play, which we have mentioned in the paragraphs dealing with *Jugendpflege*. Many cities are training teachers to take charge of the public playgrounds, and in this way good

results are being achieved. Statistics kept of a few playgrounds show <sup>1</sup> that the number of children playing and the interest shown depend entirely on the number and activity of the play leaders on the grounds. It is evident that the German child must be led even to play freely, so formalized is his training — a training for following. The leader says “work,” and the child works; “play,” and the child plays.

The equipment of the municipal playgrounds is very similar to our playgrounds in this country. There are poles for climbing, swings, parallel bars, trapeze, sand pits, and the like. There is also ample room for running games, football, and tennis. The latter game is not played much by the lower classes.

One of the most pleasing and helpful activities connected with the *Volksschulen*, and also other schools, is the school excursion. The German is a great lover of nature, and this excursion movement has its sources in that love. No matter where one goes in Germany there are thousands of people on excursions and chiefly afoot. One meets groups of school children walking and tramping everywhere — on the heath, in the valley; on the mountain, in the forest. Many of these excursions are only for an afternoon; many last a week or longer. Frequently a band of school children wanders from town to town, earning board and lodging by singing in the streets. Our first impression in regard to the German school system which we derived from actual observation was furnished by a band of wandering schoolboys which we met in the mountains of the Bavarian Highlands.

School excursions have an educational and a physical bearing. We shall discuss school excursions in connection with several of the subjects of the school curriculum. These excursions are particularly important for children from great cities who are unacquainted with rural life and activity. In some of the larger

<sup>1</sup>Lexis, vol. III, p. 85.

cities excursions by tram are undertaken by the children of the *Volksschulen*, sometimes to the mountains, sometimes to the seashore. Such trips are gotten up and planned by the teachers and are supported chiefly by the benevolent associations that are interested in children. The excursions are sometimes free; on other occasions each child pays a certain nominal sum.

The physical value of these excursions is self-evident. The educational value is used to the greatest possible degree. The teacher plans in advance for the trip, explains to the children what they will be expected to see, and prepares a great fund of information with which he is able to answer all the children's questions. The excursions furnish practically all the opportunity a child gets of asking natural questions, and that is the reason the work built on excursions is perhaps the best that is done to-day in the German schools.

The material used in the large cities for instruction in botany is usually supplied from the municipal gardens and is delivered free to the schools. The botanical gardens also serve School  
Gardens the schools as laboratories, inasmuch as the teachers bring their classes to the garden for instruction. This scheme is at best insufficient and in many ways unsatisfactory. The newer schools have been built on plots large enough so that each school may have a garden of its own. The children of the school in this case have the care of the garden, each class being assigned a particular portion to care for. The children raise flowers and vegetables of all sorts. Sometimes there is a little pond built in the garden where the pupils can watch the development of fish, frogs, and other water animals.

In a few cities one finds large unoccupied plots of ground, cut up into little portions and assigned to boys from the *Volkschule* to care for and plant with whatsoever they will. Aside from keeping the boys active, this plan also interests many in horticulture and gardening as careers. Prizes are frequently

given to the boy or girl who raises the best flowers or vegetables. Not only do the school gardens interest the children, but they also awaken the interest of the neighboring communities in the activity of the school.

The price of theater tickets in Germany is a great deal less than in America. Since most of the theatrical productions are provided by municipal or royal players, the city can afford to give reduced rates or free seats to the school children. Free seats or cheap seats for school children are the rule for children's plays. This holds

Theater  
Tickets for  
School  
Children

true particularly at Christmas time. Fundamentally the purpose of this movement is to interest the children in and awaken a finer understanding of the beauty of the German drama. The plays which are to be seen on the stage are usually read and studied in school, then followed by the theatrical production. The plays that are most frequently visited are: Heyse's *Colberg*; von Wildenbruch's *Die Quitzows*; Lessing's *Minna von Barnhelm*; Schiller's *Wilhelm Tell* and *Jungfrau von Orleans*.

Thrift is a well-known characteristic of the German. It has been preached in Germany for centuries and has also been practiced. A stranger is not long in the country

School  
Savings  
Banks

before he hears of *Sparkassen* and upon investigation it is found that almost everyone has a vital interest in a *Sparkasse* (savings bank or institution) of one kind or another. These institutions are both public and private, but always under the control of the banking authorities. In the cities the "city savings bank" is generally the most important of this class of savings institutions, and here and there throughout the city are branch depositories, where the working class can find easy access and opportunity to deposit its savings, small though they may be. Every family has its savings book, which is most carefully guarded so that when old age overtakes the German working man there is generally a nest egg laid away.

This idea of saving has been carried over into the schools. Formerly the principle of economy was taught the children; but some teachers came to believe that the best way to learn thrift was to practice it, and consequently in the middle of the last century school savings banks began to spring up here and there. The clergy as well as the teachers have contributed largely to the development of this movement. As early as 1850 school savings banks were established in the Sunday schools (continuation schools) for the purpose of helping the children to save enough money to buy Bibles, clothes, and song books for confirmation. The school inspector at Hohenwald, in Brandenburg, did a great deal for this movement and established a bank for the school children in 1867. In 1880 the Society for School Savings Banks was founded and since that time the number of these institutions has increased very rapidly, so that at the present time there are thousands of schools in which the children lay aside so much each week, and according to the last reports there are many millions of marks to the credit of the school children of Germany.

In almost all German states there are laws or regulations concerning the organization and conduct of savings funds.

Naturally, there are many different methods of collecting the money from the children and putting it out at interest. As a rule, the children bring their savings on Monday of each week, or the first of every month, and each class teacher collects these amounts and turns them over to the teacher who has charge of the saving accounts for the whole school. Each child has a bank book, in which the teacher enters the amount deposited, and the book is then returned to the child. The teacher of each class also keeps a general entry book in which he enters the moneys received by him. In the schools which we have visited, the school savings bank was under the supervision of the *städtische Sparkasse* (city savings bank), where the money of the children was usually deposited. The rate of interest is usually  $3\frac{1}{8}$  per cent.

In some schools there are slot machines where the children may get a deposit check on the insertion of a ten-pfennig piece. These checks are collected and when they amount to one mark they are turned over to the teacher and the child is credited with that amount. The advantage of this system lies in the fact that a child can get a deposit check as soon as he gets his hands on his ten-pfennig piece and does not have to carry his money around a whole week or month past all the tempting windows where pennies are so easily spent. Another system of saving which is rather common is the stamp system. The children buy stamps (saving stamps) which are specially for this purpose, and they paste these in their books. This is merely another form of registration and it seems to be more objective to the children than when figures are merely written down.

The conditions of withdrawal also vary. In some systems the money must be kept on deposit until the child is fourteen or removes from the city. In other systems the parents are allowed to withdraw the savings at any time. As a rule the money is kept until the child leaves school, so that there will be a fund on hand at confirmation time when the child takes up his or her calling.

At the beginning of the savings fund movement, the teachers were opposed to it on many grounds. The real objection was that it caused a great deal of work for which the teachers received no pay. At that time the collection of the money took place outside of school hours, while now the time is generally taken out of the regular school time. It is interesting, however, to notice some of the reasons given as argument against school savings banks, in view of the fact that one never hears a teacher at the present time maintain them. The following are some of the reasons given in 1880 against the foundation of such funds in the schools: There is no cogent pedagogical foundation for the establishment of school savings banks, for the schools possess



a sufficient number of means for awakening the sense of economy. The child does not possess the right conception of thrift, that is, the understanding of money and labor in their relationship. The school has no time for such work. School savings banks undermine the confidence existing between the home and the school. They produce class feeling. They produce jealousy, greed, covetousness, and far worse qualities. They destroy the inclination of the child to work at home. They deprive the children of the right conception of the purpose of the school. They assume one of the functions of the home, — the inculcation of the principle of economy and thrift. They commercialize the child's spirit.

In spite of these arguments, or rather, statements, the movement increased very rapidly, because there was a need felt among the people for just such an institution, where children could learn to save, whether there was a pedagogical reason for it or not. A prominent rector in Berlin said to us, "The time we spend in collecting the money from the children each week is the most valuable half-hour we spend."

There are school banks in America, but they are by no means so general as in Germany, though the reason for it is not far to seek. The American boy saves his money on his own initiative. He goes straight to regular banks and opens up his account. America has a lesson to learn in this regard, and school banks, under city or state banking supervision, would do much to increase the thrift of the American school children.

We have endeavored to mention briefly in this chapter some of the activities which supplement the work of the *Volksschulen*. One would scarcely find all of these movements connected with any one school; however, every activity Conclusion mentioned above is growing rapidly from year to year. The country child fares very badly, just as he does in America, except in the matter of teachers. The country girl and boy have their

compensation in other ways. It is difficult to measure the actual value of all the extracurricular movements, but it seems to us that if all the children could partake in all of them, they would outweigh the work done in the schoolroom as far as real building for life is concerned.

## CHAPTER IX

### PREPARATION OF THE ELEMENTARY SCHOOL TEACHER

THE chart on page 160 indicates the number of years of preparation required of the elementary school teacher and the schools in which this preparation is generally obtained. The rule is, that the teacher has attended an elementary school (*Volksschule* or *Mittelschule*) for eight years, the normal preparatory school for three years, and the normal school for a like period of three years, in all a preparation of fourteen years' duration.

The majority of the elementary school teachers attend the *Volksschule*, though just what percentage is not determinable. Those who do not attend the *Volksschule* attend a middle school. Only in a few cases does the pupil of a *Gymnasium* become a teacher in the lower schools. A pupil who has finished the full nine years' course of a middle school enters the second year of the normal preparatory school (*Präparandenanstalt*) without examination, and if he has passed the one-year volunteer examination (see p. 85), it is possible for him to enter the first class of the *Präparandenanstalt*, or the lowest class of the normal school (*Seminar*). If the pupil has merely finished the *Volksschule*, he enters directly into the lowest class of the *Präparandenanstalt*. Attention is called here to the diagram, which indicates the classes, schools, and possibilities of transfer from one school to another. Likewise the age of the pupil who has made regular progress is designated. No one may begin to teach in Prussia before the completion of the twentieth year, nor may any one be admitted to the normal school before the age of seventeen.

*Volksschule* and  
Middle  
School

		School Year Age		
<i>Mittelschule</i>	I	I	14 19	<i>Normal School</i>
	II	II	13 18	
	III	III	12 17	<i>Lehrer seminar</i>
	IV	I	11 16	
	V	II	10 15	<i>Normal Preparatory School</i>
	VI	III	9 14	
	VII	I	8 13	<i>(Präparanden-Anstalt)</i>
	VIII	II	7 12	
	IX	III	6 11	<i>Volksschulen</i>
		IV	5 10	
		V	4 9	
		VI	3 8	
		VII	2 7	
		VIII	1 6	

A pupil of the *Volksschule* wishing to become a teacher enters next the *Präparandenanstalt*, to which he obtains entrance by passing an oral and written examination on all the subjects of instruction of the *Volksschule*. The *Präparandenanstalt* is an institution for preparing boys for the normal schools. The course is generally three years. These institutions are partly state, partly city, and partly private. Some are in connection with normal schools and others are entirely separate institutions. There are no normal preparatory schools for girls, but provision is made for the girls' preparation in girls' higher schools and private institutions. In 1912 there were eighty-four normal preparatory schools in Prussia supported by the state, and one hundred fifty-nine institutions, either supported by the cities, or of a private nature. All receive state support. In the state schools there were 7156 pupils and 14,623 in the other schools. In the same year the state preparatory school cost 2,393,802 M., or about 334 M. per pupil. The pupils are expected to pay their own expenses, but in case they are not able to do so, the state furnishes them aid.

Normal  
Preparatory  
School

The normal preparatory schools, as well as the normal schools, were reorganized thoroughly by the *General Regulations of 1872*, and again reorganized by the regulations of July 1, 1901, and they exist to-day in the form given them by the regulations last named. The normal preparatory schools were reorganized in a uniform way for all Prussia in order that the pupils coming to the normal schools should have pretty much the same preparation and ability. According to the course of study of 1901, the preparatory school has three classes, each class comprising a year's work. It is also to be noticed that the course of study of the normal school and the course of study of the preparatory school form a complete whole, and the work of the preparatory school is built directly upon that of the *Volksschule*. In fact it is the sole task

Purposes of  
the Normal  
Preparatory  
School

of the preparatory school to continue the general education of the lower school, while it is the business of the normal school to finish the general education of its pupils, and give them their professional training, too. The first year of normal preparatory school is to take pupils with greatly varying preparation, for they come from schools of varying efficiency, and bring them to the same standard of advancement. In some subjects, such as grammar, arithmetic, and geometry, the work of the highest class of the *Volksschule* is repeated to some extent in the first year of the preparatory school. As a result of the new regulations of 1901 a great deal of the academic work of the normal school has been shoved down into the normal preparatory school, in order to give the students in the normal school more time for methods, practice teaching, history of education, and other professional work. Some subjects or parts of subjects are finished entirely in the preparatory school, for example, Bible history, catechism, German grammar, elementary arithmetic, ancient history, writing, and zoölogy in part.

As mentioned above, the normal preparatory school has a three years' course, which is a continuation of the work of the *Volksschule*. Pupils, however, who come from the *Volksschule* must pass an entrance examination for the preparatory school. This examination is a means of elimination of the poorer class of pupils, in order that the normal school system shall not become overcrowded. As a rule not more than thirty pupils are admitted to any one class of the school, so that the normal number of pupils in a normal preparatory school is ninety.

The boy on applying for admission to the preparatory school must furnish a birth certificate, also certificates of confirmation, vaccination, revaccination, health previous training, and a certified attest from the father that the latter is willing to support the son throughout the course and that he has the neces-

sary means for doing so. The examination must be passed, and the enrollment is finally approved by the Provincial School Board, under whose supervision are all normal schools and normal preparatory schools. The tuition is generally about thirty-six marks per year. The institution is an *externat*. The pupils board with citizens of the town, but are always under the supervision of the school authorities. Pupils who are not financially able to pay all their expenses are excused from paying the tuition fee, and frequently receive aid from the state.

## COURSE OF STUDY OF THE PRUSSIAN NORMAL AND NORMAL PREPARATORY SCHOOLS

SUBJECTS	PREPARATORY SCHOOL			NORMAL SCHOOL			REMARKS
	III	II	I	III	II	I	
Pedagogy . . .	—	—	—	3	3	3	<sup>1</sup> Included in hours of the several subjects.
Methods . . .	—	—	—	—	(4) <sup>1</sup>	4	
Practice Teaching	—	—	—	—	—	4-6	
Religion . . .	4	4	3	3	4	3 <sup>2</sup>	<sup>2</sup> One hour-methods
German . . .	5	5	5	5	5	3 <sup>3</sup>	<sup>3</sup> One hour-methods
Mod. Languages .	2	2	3	2	2	2	
History . . .	2	2	3	2	2	2	
Mathematics . .	5	5	5	5	5	1 <sup>4</sup>	<sup>4</sup> One hour-methods
Natural and Phys- ical Science . .	2	4	4	4	4	1 <sup>5</sup>	<sup>5</sup> One hour-methods
Geography . . .	2	2	2	3	2	1 <sup>6</sup>	<sup>6</sup> One hour-methods
Writing . . . .	2	2	1	—	—	—	
Drawing . . . .	2	2	2	2	2	1	
Physical Training	3	3	3	3	3	3 <sup>7</sup>	<sup>7</sup> One hour-methods
Music . . . . .	3	4	5	4	4	4	
		I			I		
Agriculture . .	—	—	—	I	I	—	
Total . . . .	34	37	37	38	38	33-35	

At the end of the course in the normal preparatory there is a leaving examination known as the *Entlassungsprüfung*. It covers the work of the preparatory school and those who are successful

in the examination are admitted to the normal school. This examination corresponds exactly to the entrance examinations (*Aufnahmeprüfung*) for normal schools, the only difference being that the former examination is held at a normal preparatory school, while the latter is held at the normal school, and that the dates of examination may be different. (See p. 166 for *Aufnahmeprüfung*).

In general the course of study of the normal preparatory school is merely a continuation of the work of the *Volksschule*.

**Courses of Study of the Präparandenanstalt** The course of the *Volksschule* and the normal preparatory might well be compared with the courses of the American elementary and high school, though the subjects of study are by no means the same. The average graduate of the German normal preparatory seems to be equally advanced as the graduate of an American high school, except in the practical subjects and in physical development. The German boy of seventeen is soft and unfinished in comparison with the average American high school graduate. The difference is not in academic knowledge, but in knowledge of things and people, which the American boy acquires under the American system of life, and through the social activity into which every American high school student is thrown more or less.<sup>1</sup>

The next step in the preparation of the elementary school teacher is the *Lehrerseminar* or normal training school, with a three years' course. **The Normal School** In general these normal schools are state institutions. In 1912 there were 201 state normal schools in Prussia; 18 of these schools were for women and the remainder for men; 4 were non-sectarian, 126 for Protestant teachers, and 71 for Catholic. There was a total of 18,887 students enrolled and 1435 teachers employed. These schools were supported at a total expense of 14,791,664 M., of

<sup>1</sup> See Kandel, *Training of Elementary Teachers in Germany*, for the course of study in the Prussian normal schools.



which 12,845,313 M. was contributed by the state. Each student cost on the average a little over 783 M.

The majority of the normal schools are boarding institutions, just as are some of our normal schools in America and those in France. The schools require a tuition fee, which, however, is low. The pupils who can pay their board are *Internats* required to do so; the others pay as much as they can, and the deficit is made up by the state. The boys live in the institutions under very strict supervision, and with a limited number of privileges. All normal schools are not *internats*, and the pupils of non-boarding institutions live with the people of the town.

The normal schools are sectarian and non-coeducational. The Protestants are educated in one school, the Catholics in another, and the Jews in another. So far as we can see there is very little reason for such separation. The women have as yet few normal schools. Up till the present time the women who have become teachers in the *Volks-schulen* have attended public or private girls' higher schools and then taken the examination required for admission to the profession. A large number of the women teachers have really passed the examination for the middle or higher girls' schools, but, on account of a lack of positions, are forced to teach in the lower schools, where also there is an oversupply of women teachers. It is customary that training schools for women are tacked on to a *Lyzeum*, in some form or other. Such regular state training schools as there are, eighteen in all, are very similar to the institutions for men. There are also a number of private normal schools for women in connection with girls' higher schools. Likewise in various cities in connection with the city girls' higher school there are courses for teachers. Taking it all in all, the normal school system for women is not developed fully in Prussia, but it is gradually taking on a form similar to that of the normal school system for men.

*Internats*

Normal  
Schools for  
Women

Each student applying for entrance to a normal school must pass an entrance examination, which is called the *Aufnahmeprüfung*. Pupils of recognized normal preparatory schools are not required to take this particular examination, but must pass a leaving examination at the preparatory school, which to all intents and purposes is identical to entrance examinations at the normal school. The entrance examination<sup>1</sup> is held at regular intervals before an examination commission composed of the commissioners of the Provincial School Board, and the director and several of the teachers of the normal school in the administrative county in question. Applications for admittance are granted only to those who will have attained the age of seventeen by the time of entrance into the normal school. Applicants must also bring certificates of health and character, just as in the case of pupils entering the normal preparatory schools, as we have described above. It is immaterial where the applicants have acquired their previous training, be it in the *Volksschule*, *Mittelschule*, *Realschule*, *Gymnasium*, or *Präparandenanstalt*. No one is admitted to the examination who has passed the age of twenty-four. The examination covers all the subjects of instruction in the preparatory school and consists of a written part and an oral part. The written part consists usually of little themes dealing with religion, history, geography, or science, and general topics selected from the candidate's field of experience. In place of the first group of themes, a number of questions requiring two or three minutes' writing may be assigned. The oral part of the examination is held preferably before the whole commission and is the most important part of the examination. Any applicant deficient in any one major subject can be accepted only in case the whole commission thinks the applicant can make

<sup>1</sup> *Allgemeine Bestimmungen* of October 15, 1872. *Bestimmungen betreffend das Präparandenwesen*, July 1, 1901.

up the deficiency. Those who are totally lacking musical ability are excluded, but those who are merely deficient or are so because of some defect in hearing or are deficient in organ playing may be accepted. The examination requires a pretty thorough knowledge of the work planned for the normal preparatory schools.

After the examination has been passed the successful ones are admitted to the normal school. Only those are announced as having passed for whom there are places. If the normal school in one district needs more pupils, they are sent from another district which has too many. The classes are held to thirty as nearly as possible. On entering the normal school the student must sign the following promise:<sup>1</sup>

Upon my entrance into the royal teachers' training school at X—, I hereby obligate myself to pay back all aid received in cash or in other forms, and further to pay as tuition fee for instruction received thirty (30) marks for every semester spent in the school,

(1) if, I, before the end of the course, should leave the school of my own account and without being compelled to do so through illness, or should be forced to leave on account of bad conduct;

(2) or if I should refuse, within the first five years after passing my first teachers' examination (see below), to accept the position in the public school service assigned to me by the provincial or central authorities.

After the completion of the normal school course all candidates for the teaching profession must pass the First Teachers' Examination (*Erste Lehrerprüfung*) on the basis of which they receive the qualification necessary for temporary appointment in the *Volksschulen*. Applicants are also admitted to this examination who have not prepared at the normal schools. The examination in reality is the leaving examination of the normal school, but serves the purpose of teachers' examination, too, just as in some states in America graduation from the normal

First  
Teachers-  
Examina-  
tion (*Erste  
Lehrer-  
prüfung*)

<sup>1</sup> *Min. Erlasse* of January 24, 1887, and May 14, 1892.

school is equivalent to certification for teaching. The examination commission consists of the commissioner of the royal Provincial School Board as chairman, a commissioner of the administrative county in which the examination is held, and the director and all the regular teachers of the normal school. Sample copies of drawing and writing must be submitted by all candidates before the examination begins. The examination is made up of written, practical, and oral tests.

The standard of knowledge and ability demanded is determined by the course of study for normal schools. The candidates who received their training in the normal school have to prepare the following themes or compositions:

**Written Part of the Examination** (1) theme dealing with a topic taken from pedagogy or principles of teaching, from the history of education, or from German literature; (2) composition in religion, and (3) another in history; (4) a translation from German into a foreign language and from a foreign language into German; (5) for those who study organ and harmony, the composition of a choral. For the first (1) piece of written work 4 hours are allowed, and 2 hours each for the others. The candidates coming from without the *Seminar* must prepare the same written work, and in addition thereto do some written work in mathematics (3 hours), and in geography and the natural sciences (2 hours each). If the written work is of high quality, the candidate may be excused entirely from the oral part of the examination.

At the close of the written examination, topics are assigned to the various candidates, which they shall present as model lessons before the commission two days later. A written outline of the lesson presented must be prepared by the candidate and laid before the commission. The topics assigned may be selected from any subject of instruction in the *Volksschule*.

**Teaching. Practical Part of the Examination**

The oral part of the examination for the candidates from the normal school includes oral tests in pedagogy, religion, German, history, a foreign language, and in methods for all elementary school subjects. The other candidates must pass an oral examination in all subjects of the normal school. The latter class of candidates are never excused from the oral examination. The commission decides on the success of the candidate according to the total results of all parts of the examination. Whoever is deficient in German, religion, pedagogy, or history fails in the examinations. Deficiency in mathematics is reason for failure of a candidate not coming from the normal school. Failure in more than three of the other subjects of examination is cause for refusal of the teaching certificate.

If a candidate passes the examination, he receives a certificate which indicates the name of the holder, personality, training, industry, conduct, the results of the written tests, as well as of the oral test and the model lesson. The administrative county adds its certification of qualification for teaching, and the candidate is now subject to temporary appointment in an elementary school.<sup>1</sup>

The Prussian elementary teacher is appointed at first only temporarily. At the end of two years' service, the probationary is allowed to apply for admittance to the Second Teachers' Examination, the passing of which entitles the teacher to permanent appointment. This examination, according to the regulations issued July 13, 1912, consists of three parts; a written, a practical, and an oral. The chief change made by the new regulations from those of July 1, 1901, is that the practical (teaching) part of the examination is held in the candidate's own school and class, in which he has taught at least for one year. This innovation is

<sup>1</sup> *Neue Bestimmungen über die Seminarsenllassungsprüfung*, July 1, 1901.

of decided advantage to the teacher, for he is not required, as formerly, to give his trial lesson with strange pupils. The temporary teachers have two opportunities each year to register for the examination, in March and in September, and if the application is granted, they are examined sometime within the following six months. The examination is held by a commission of three, composed usually of the county school superintendent, the district school inspector, and the principal or head of a normal school, middle school, or *Volksschule*. The fee for the examination is five dollars. This second examination must be passed before the end of the *fifth* year of teaching.

The written part of the examination consists of a treatise prepared by the candidate on some professional topic which he himself has selected out of his recent educational activity with the approval of the district school inspector. This treatise is prepared at home and is generally twenty-five or thirty pages in length. The writer must also make out a list of all books and other sources which he has used in the preparation of the treatise, both of which he forwards to the district school inspector, along with his application for examination. The district school inspector writes his report of the teacher's work in the application blank and, together with the treatise, forwards it to the commission. A member of the commission reads the treatise, reports to the commission on it, and then it is decided whether the probationary be allowed to take the oral part of the examination.

The practical test covers generally three subjects, usually in the class which the candidate has taught the most, or if he has been continually occupied in other classes, a part of the examination may be held in these classes. The teacher has already submitted his weekly program to the commission, and it in turn notifies him on what day it will examine his work. The commission takes into consid-

eration the general condition of the class as well as the ability of the teacher to impart instruction. The teacher is required to treat new material in order to show his methods in working upon the "understanding and feelings of the children."

The oral part of the examination, which is given immediately after the practical test, deals with the professional knowledge and ability of the teacher. He is examined in psy- The Oral  
Test chology, logic, ethics, methods of teaching, history of education, especially the development of the Prussian *Volkschule*, school law, and administration. The result of the examination is obtained by consideration of all parts thereof. In case of failure the candidate is allowed to repeat the examination once, and in case of the second failure, he is dismissed from the service.

The certificate which the successful candidate receives after the examination is over is as follows:

On the basis of the examination of his school work and training, which he has passed successfully before the local commission, the qualification for permanent appointment as teacher in the elementary school is granted Herr N. N., born July 10, 1890, in district of Randow in the administrative county of Stettin, and of Protestant religion, at present teacher in the rural district of Marienburg in *Regierungsbezirk Hildesheim*.

Teachers in the public schools are selected by the local authorities from the list of those eligible, that is, from a list of those who have passed the examinations described above. Teachers are elected by the local authorities but must Permanent  
Appoint-  
ment be confirmed by the county government, which issues the appointment or notice of confirmation of election. By local authorities is meant the town council, which acts on the recommendation of the school deputation or the school board, *Schulvorstand*, in communalities which form their own school corporation; in manors the local authority is the owner, and he, in coöperation with the school board, selects the teachers; in

other school corporations the school board or the school deputation is the electing body.<sup>1</sup>

Thus finally the German teacher is firmly fixed in his position. From the time he enters the normal preparatory school until he is finally a full-fledged teacher four examinations must be passed. It is a process of selection, which only the best survive. There are two reasons for so many examinations. The first reason is that a large number who wish to become teachers must be weeded out, and the second is that a high standard of ability is desired. Both of these results are obtained. Once a teacher is in the profession, however, he is there for all time. It is a very rare occurrence that a teacher is dismissed. He is a state official and does not have to depend on the whims of a local school board for his bread and butter. This sense of security takes a great burden of worry from the mind of the teacher, for he knows that he will be cared for the rest of his life and consequently does not have to suffer under the bugbear of dismissal, as do so many American teachers. The German teaching profession is a compact, permanent body, and unmolested by material cares can pursue serenely an educational policy. Not only is the head of the school system of a city or district safe and secure, but so also are his subordinates. Removals of city superintendents never occur in Germany as they do in America.

The sense of security which the German teacher feels *sometimes* produces a bad effect, that of indifference and routine performance of duty, the feeling, — "I'll do just enough to escape censure. What's the use of overexertion?" The number of German teachers with this feeling is very small. I have seen some of that kind, but the vast majority work hard and work overtime. Every German official has a very great pride in the fulfillment of his duty.

<sup>1</sup> *Schulunterhaltungsgesetz vom 28 Juli, 1906*, p. 24, Heinze, *Im Ami*.



After the first teachers' examination the young teacher enters the profession, as we have seen above. As a rule he is designated then as candidate (*Schulamtsbewerber*). If he is unfit for military service, he is allowed to seek a position, and is appointed temporarily with all the rights of a teacher. His position is changed without further ado from a temporary to a permanent one, as soon as he has passed the second examination. If the candidate is fit for military service, he is not allowed to apply for a position, but is appointed only as substitute until he has satisfied his military requirements. Meanwhile he is sent wherever the county government desires. In reality, the candidate who is unfit for military service has a professional and financial advantage over the candidate who is fit.

Since 1900 the alternative of serving as a one-year volunteer or one year at the expense of the state has been given all elementary school teachers. Teachers who are able serve at their own expense, because it gives them and their profession a higher social standing. One-year active Military  
Service of  
Teacher service costs from 700 to 800 M., while the *Einjähriger* needs at least 2500 M. Teachers who do not possess the means for serving as one year volunteers, are supported by the state. They serve only one year, but do not receive *Schnuren* (shoulder cords) as do those volunteers who pay their own expenses. Nor do those teachers who are supported by the state have all the rights and privileges of the regular one-year volunteers. They cannot choose their regiment nor their garrison. They must live in the barracks and receive the same food and equipment that the two-year men do. On the other hand, the teachers better financially situated have all of these advantages which are denied two-year men. ¶ Teachers have all the privileges and rights of state servants<sup>1</sup> and are direct officials of the state.<sup>2</sup> Teachers have active but

<sup>1</sup> Art. 23 of the Constitution, January 31, 1850.

<sup>2</sup> *Min. Erl. vom 19 Juni, 1889.*

not passive suffrage in the community, that is, they may vote, but they may not be elected to office. A teacher in the exercise of his duty cannot leave the community in which his school is without the consent of his superiors. He is also not allowed to have his dwelling outside of the community in which he teaches.

The teacher is excluded from certain kinds of offices. He cannot be a member of the magistracy nor of the town council, nor can he be called as jurymen. He cannot accept other remunerative employment without the consent of the school authorities. A special privilege is allowed the teacher as an official of the state in that he cannot be subjected to transfer from one position to another in form of punishment. He may be transferred for the good of the service, but his position must be just as remunerative and just as high. Previous to 1909 elementary school teachers were not compelled to pay any kind of direct communal tax, *i.e.* income tax, but under a new law all teachers appointed since that time are required to pay communal taxes, as other persons are compelled to do. They are also required to pay state taxes.

The Prussian women teachers are not allowed to marry and retain their positions in the schools. Through marriage the woman teacher not only loses her position, but also all claims to pension which she may have acquired up to that time. The prohibition of marriage to women in its present form will not be able to hold out indefinitely. Already certain concessions have been made to married women teachers, in that childless widows and, in exceptional cases, widows with children are appointed to positions, while widows and married women with husbands are appointed in exceptional cases temporarily, or to substitute positions. It is manifestly unjust that women lose their pension rights on marriage. Some states in Germany grant a

Privileges  
and Rights  
of Teachers

Marriage  
Prohibited  
for Women  
Teachers

compensation for the surrender of these rights. In other states women teachers are allowed to reënter the school service in case the marriage is dissolved through the death of the man or for some other cause. Germany is recognizing that the schools need women, but to withdraw so many from the opportunity of marriage and child-bearing is too great a loss for the human resources of the state.

The official position of the teacher is affected by his or her religious confession, sex, and subject of instruction. As far as the confession of teachers is concerned, there is little or no difference in the official standing of the teachers of one confession compared to that of another. Protestant teachers and Catholic teachers have the same rights, the only difference is that the Protestant is generally appointed to a Protestant school and the Catholic teaches Catholic children.

Position and  
Confession  
of the  
Teacher

Quite large differences exist between the position of the male and the female teachers. The character of the school community, whether it is urban or rural, very often decides whether a woman or a man shall get the position. In Catholic schools women are chosen in large numbers for girls' classes. The number of women teachers has increased of late years very rapidly on account of the lack of men teachers a few years ago. Now there is a surplus of women, and the state is unable to control the number preparing for the profession, because the girls prepare generally in private or city schools. Men are prepared in state normal schools and the number admitted can be cut down to the number needed. In many cases, women who filled positions temporarily during the time when male teachers were wanting have already been crowded out. In the country, where the teacher of the *Volksschule* is also employed in the boys' agricultural continuation school, women can, of course, find no employment. In Prussia there are no regu-

Position  
and Sex

lations as to whether a man or a woman shall be appointed; while in other German states it is generally regulated by law what positions can be occupied by women, and what are open to men.

Generally speaking, the German elementary male teacher does not specialize. He is trained to teach all the subjects of the *Volksschule* curriculum. Among the women teachers there is more specialization. There are a great number of what are known as *technische Lehrerinnen* (female technical teachers), that is, teachers of special subjects such as sewing, physical training, cooking, and drawing, for which there are special examinations. It is only natural to expect that men will also specialize in the future, particularly if manual training finds general acceptance in the *Volksschulen*.

Out of long past centuries the usage has come down of combining the position of teacher in rural communities with some form of service in the church. Accordingly the teacher is both servant of the church and the state. Almost all German states have abolished the combination of the two offices, but it still exists in Prussia.

For example, in the administrative district of Hildesheim, where this report was written, forty-six per cent of the teaching positions are organically connected with a church office. In cities such a combination rarely exists. Naturally the matter will give great trouble in regulation, for the church will not give up its hold on the school-teacher readily, and then equalization of property will also cause many difficulties.

In visiting German elementary schools the teacher is one of the chief objects of interest. After one has observed several hundred classes, in all sorts of places, both in the city and in the country, one begins to form ideas of the elementary school teacher as a type. The question comes to mind over and over again, — How old is the teacher? From what kind of family do these

teachers come? Are they married? What is the general condition of their health? What per cent of the teachers are women? In other words, what are the personal relations of the German elementary teacher? Such questions in America are difficult to answer because of the sad neglect of school statistics. Under present conditions in America to find the origin or to determine the kind of family from which each elementary school teacher came would be absolutely impossible, though it is rather important to know the sources from which our teaching material is drawn. Studies of this nature have been made, but the results are based on comparatively few cases and the information was not always reliable. In Prussia it is a very easy matter to find out the answer to any of the above questions, and there is no doubt as to the authenticity of the figures. The age of the teachers will first be considered.

Of every hundred men and women teachers the following numbers fell into the age groups indicated.

	MEN <sup>1</sup>			WOMEN		
	CITY	COUNTRY	TOTAL	CITY	COUNTRY	TOTAL
Under 30 years . . . .	19.4	43.7	34.3	38.7	63.4	47.5
30-50 years . . . .	62.0	40.9	49.0	49.4	29.0	42.1
Over 50 years . . . .	18.0	15.4	16.7	11.9	7.6	10.4

A study of the preceding table shows that one would find very few teachers under twenty years of age, while about one teacher out of every three is between twenty and thirty years old. Among both men and women teachers about six of every ten are under forty years of age, about two in ten are between forty and fifty, and a like number are over fifty. This presents a striking contrast to the con-

<sup>1</sup> *Schulstatistische Blätter*, vol. XI, No. II, 101.

AGE OF THE MEN AND WOMEN TEACHERS IN PRUSSIAN VOLKSSCHULEN

	TOTAL	UNDER 20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	OVER 65
Position of men in:												
City Schools	26,429	1	1,738	5,033	4,263	5,143	3,312	2,536	1,736	1,469	860	338
	1911	30	1,766	5,056	6,464	5,953	4,400	5,130	3,058	2,069	1,034	459
Country Schools	48,159	129	10,282	8,770	5,985	7,133	5,360	3,680	2,513	2,311	1,440	556
	1911	230	14,372	9,906	6,854	5,808	4,552	5,836	4,368	2,667	1,156	445
Total	74,588	130	12,020	13,803	10,248	12,276	8,672	6,216	4,249	3,780	2,300	894
	1911	260	16,138	15,022	13,318	11,761	8,922	10,966	7,426	4,736	2,190	904
Percentage in		.3	17.6	16.4	14.5	12.8	9.7	12.	8.1	5.2	2.4	1.
Position of women in:												
City Schools	9,032	23	1,197	1,816	1,512	1,542	1,136	844	497	286	135	44
	1911	114	2,765	3,261	2,720	2,109	1,517	1,489	996	593	234	63
Country Schools	4,726	66	1,263	918	639	605	503	298	178	112	45	12
	1911	142	3,427	2,004	985	582	446	538	367	188	78	32
Total	13,758	89	2,460	2,734	2,151	2,237	1,639	1,142	675	398	180	56
	1911	256	6,192	5,265	3,705	2,691	1,993	2,027	1,363	781	312	95
Percentage in		.6	13.2	18.4	14.0	16.4	12.8	10.8	7.2	4.9	1.4	.3

ditions in American public schools, where the teaching body is very much younger, and consequently much more changeable. The average teaching life of the American elementary teacher is not much over five years, or perhaps not that much, while at least eighty per cent (80%) of German teachers have taught longer than that. The sole explanation for the permanency of the German elementary teaching force is that the occupation there is a profession and the teacher holds the position for life or until pensioned.

The one thing that strikes an American visitor most peculiarly is the very large number of men teaching in the elementary schools, even in the lowest classes. One cannot help feeling that a man teacher of fifty years of age is somewhat out of place in the first grade of an elementary school. The chances are that he is out of sympathy with the children. It is true that the older teachers are generally assigned to the higher classes, if the school happens to be in the city, and the lower classes are assigned to younger teachers or to women. There has always been a very strong prejudice against the woman teacher in the German schools, and she has worked her way in with difficulty. At the present time 78.8% of the teachers are men and 21.2% women. Within the years 1901-1911 the number of women teachers increased 10,892, or 79.2%, while the number of men increased only 23%. In spite of the feeling against women teachers, the number is increasing very rapidly, and in some sections the women are almost equal in number to the men. The idea prevails among German men teachers that women have not the same amount of intellectual ability that men have, and they merely tolerate the women, all the while looking down upon them. Women teachers are carefully kept out of the upper classes of boys' schools, and even of girls' schools in some subjects. In all the boys' schools that I have visited, in which women teachers were employed,

Men and  
Women  
Teachers

the rector has always, with one exception, apologized for his women teachers, when as a matter of fact he could have much better regretted that some of his men were not quite as capable as they should have been. In one city, while visiting a school, I asked to see a particular class, and the principal replied, "Of course, you may visit it, but I am afraid you will be disappointed, for there is a substitute there to-day and a woman at that." This tends to show the general attitude of the men toward the intellectual and teaching ability of the women. It will also be noticed that the women prefer to teach in the cities, where though the salaries are about the same as in the country, the school is generally graded and the conditions under which they have to work are much more favorable.

From the following table it will be seen that about 65% of the men teachers are married, about 32% are single, and about 3% have been married. The number of single men corresponds very closely to the number of men teachers under thirty years of age, but this must not lead to the supposition that no teachers are married before that age. It is, however, a rather safe assertion, that a very large majority of the men are either past thirty or within two or three years of it, when they marry. Conditions in Germany do not permit a young teacher to marry much before that time. First of all, his salary doesn't warrant marriage before that age, and, further, there seems to be a tendency to late marriage out of personal reasons, more or less questionable. It will also be noticed that there are 39.6% of the teachers in the country who are unmarried, while only 21.3% of the men in the cities are single. This fact is no doubt explained in that a great many young men begin their teaching careers in the country and, after having passed the second examination, seek positions in the city and there marry. Among the women, of course, the unmarried form a very large portion of the women teaching body. Over

**Marriage  
among the  
Teachers**



99% of the women teachers are unmarried, there being only 22 married women in the whole Prussian system, and .9% who are widowed. A large number of women drop out of the schools between the ages of thirty and thirty-five in order to get married. If they quit before that time or rather before they have taught ten years, they have to make restitution to the state in case they have received aid for purposes of education.

MARRIAGE TABLE OF PRUSSIAN TEACHERS IN THE  
VOLKSSCHULEN

		SINGLE		MARRIED		WIDOWED	
		No.	Per Cent	No.	Per Cent	No.	Per Cent
Men Teachers in :							
City Schools	1911	7,553	21.3	27,080	76.5	786	2.2
Country Schools	1911	22,257	39.6	33,021	58.7	946	1.7
Total	1911	29,810	32.5	60,101	65.6	1732	1.9
Women Teachers in :							
City Schools	1911	15,663	98.7	12	0.1	186	1.2
Country Schools	1911	8,733	99.4	10	0.1	46	.5
Total	1911	24,396	99.0	22	0.1	232	.9

It is a difficult matter to obtain statistics which would show accurately the condition of health and the general constitutional character of the elementary teaching force, but there are several things worthy of notice here, some based on our own observation, and others based upon official figures. To us at least six out of every ten male teachers seemed to have very robust health. This was not only true among the younger teachers, but also among the older. We may account for this in several ways. First, as we shall see later, a rather large percentage of the teachers come from the country or from rural districts, and consequently bring more physical strength into

the profession than do the members from the cities. Next, no one is allowed to become a teacher who is not able to meet the prescribed physical requirements. Another element contributing largely to the health and general spiritual welfare of the teachers is the lack of worry. Being parts of a system where the loss of position and income is well-nigh impossible, where fear of rebuke from superiors is almost a minus quantity, the teachers' general frame of mind and high degree of contentment will conduce to physical well-being.

In asking teachers in what way they suffered most, we have generally received the reply that headaches and throat trouble were the commonest causes of complaint. The matter of headaches is easy of explanation. They are caused, we are sure, ninety-nine times out of one hundred by poor ventilation. Fresh air is one thing German schools cannot boast of. In fact, during the recitation the windows are kept closed and the ventilators may or may not be open. Such a condition of the air not only produces frequent headaches, but toward the end of the day causes the teacher to be sleepy, or at least to appear so. By the end of the day we mean twelve or one o'clock, the closing time of most schools in cities. Throat complaints are caused by the excessive amount of talking required of the teachers, as demanded by the oral methods so largely employed in German schools. Some teachers have told me that they frequently give written work in order to get a little rest for their throats. The teachers talk not only a great deal, but very loud and distinctly, so that the strain on the throat is very great and hence the complaints.

One might be led to believe that poor ventilation in the schools would lead to tuberculosis. Judging from a comparatively small number of cases, we cannot draw the conclusion that tuberculosis is a disease to which teachers are particularly subject.<sup>1</sup>

<sup>1</sup> *Schulstatistische Blätter*, vol. XI, No. 11, p. 106.

The figures are based on the report of the "Life Assurance Society of German Teachers."

Between 1897 and 1912 there were 2167 deaths in the membership of the society, 247 or 11.4% of which were caused by tuberculosis of one sort or another. In 1911 tuberculosis was the cause of 8.7% of all the deaths in Prussia. Thus the percentage of deaths among teachers from tuberculosis is a little higher than among the general population, but the difference is not great enough to warrant our saying that the German teacher is more inclined to the disease in question than are workers in other fields.

We get a very close insight into the general health or physical strength of the male teacher by examining statistics which tell in how far they have satisfied their compulsory military service. Every German citizen, if he is physi-  
cally able, has to serve in the army, and as is well known, the training is very strenuous and makes large demands upon the physical strength of the recruits. Therefore, if a man is taken into service, it is a fair indication that he has plenty of health and strength.

General  
Health of  
the Male  
Teachers

These figures show that only 45% of the men teachers have fulfilled their military obligations, while 46.6% are declared either totally unfit for service, or have been placed on the *Ersatz-Reserve*, which means practically the same thing. This state of affairs shows us very clearly that the general health and physical ability of the Prussian teacher leaves much to be desired. After examining the figures for the years 1889-91, one is led to believe that the work in the *Seminar* and in the first few years of teaching is responsible for the condition existing. The boys enter the *Seminar* in tolerably good health, but let us notice their condition after they have finished their course and have been teaching a few years. Of the 7177 teachers of the years 1889-91, there are 1535 temporarily excused from military service on

account of health, 503 have been put in the reserve, and 819 have been declared absolutely unfit for military service.

# MILITARY SERVICE OF ELEMENTARY TEACHERS IN PRUSSIA, 1911<sup>1</sup>

YEAR OF BIRTH	NO. OF TEACHERS	NO. WHO HAVE SATISFIED MILITARY REQUIREMENTS			NO. WHO HAVE NOT SATISFIED MILITARY REQUIREMENTS, DIVIDED AS FOLLOWS:			
		by less than 1 yr. service	as 1 yr. vol- unteer	by at least 1 yr.'s service	Postponed Service		Put on Reserve	Found not good
					on request	account of health		
1891 . . . .	894	1	2	2	479	357	12	41
1890 . . . .	2,645	1	31	129	1,453	824	50	157
1889 . . . .	3,638		83	423	1,713	354	441	624
1888 . . . .	3,764	1	160	734	1,202	96	573	998
1887 . . . .	3,646	4	274	922	467	62	739	1,178
1886 . . . .	3,354	5	486	901	137	36	683	1,106
1885 . . . .	3,156	2	493	913	33	15	643	1,057
1884 . . . .	3,125	2	533	867	6	13	662	1,042
1883 . . . .	2,861	4	572	766	2	23	547	947
1882 . . . .	2,823	4	512	835	1	11	537	923
1881 . . . .	2,766	30	398	891	1	8	568	870
1880-1876 . .	13,341	4,121	672	22-35		75	2,740	3,498
1875-1871 . .	11,396	6,562	5	34	1	51	2,217	2,526
1870-1866 . .	8,936	4,966	11	14		75	1,419	2,151
1865-1861 . .	10,905	5,311	14	22	1	24	3,679	1,854
1860-1856 . .	7,166	3,362	16	29		33	2,183	1,543
1855-1851 . .	4,394	1,941	29	41		23	1,448	912
1850 and earlier	2,833	934	22	66	1	9	1,125	676
Total . . .	91,643	27,251	4,313	8,924	5,497	2,089	20,566	22,103
Born in the city	29,305	6,936	1,739	2,871	2,330	818	6,727	7,884
Born in the country . .	62,338	20,315	2,574	6,953	3,167	1,271	13,839	14,219
Of each 100 teachers born in the city .	100	23.7	5.9	9.8	7.9	2.8	23.0	26.9
Born in the country . .	100	32.6	4.1	11.2	5.1	2.3	22.2	22.8
Total . . .		29.7	4.7	10.7	6.0	2.0	22.5	24.1

<sup>1</sup> *Preussische Statistik, Heft 231, Teil I, p. 261.*

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## OCCUPATIONAL ORIGIN OF THE TEACHERS IN PRUSSIAN ELEMENTARY SCHOOLS

OCCUPATION OF THE FATHERS OF THE TEACHERS	THE FOLLOWING NUMBERS OF TEACHERS COME FROM HOME OF THE VARIOUS OCCUPATIONS			
	Men	Women	Of 100 Male Teachers	Of 100 Female Teachers
	1911	1911	1911	1911
A. Farming, gardening, livestock, forestry, and fishing	a. 26,067 b. 1,600 c. 827	2,912 302 27	28.4 1.8 .9	11.8 1.3 .1
B. Mining, smelting, industry, and building	a. 18,983 b. 3,565 c. 2,795	4,385 1,276 743	20.7 3.9 3.1	17.8 5.2 3.0
C. Commerce and trade	a. 7,992 b. 1,990 c. 2,518	3,024 1,683 646	8.7 2.2 2.7	12.3 6.8 2.6
D. Household Work. Day labor- ing. Personal service	a. b. c. 335	  60	  .4	  .2
E. Public service and the so-called free occupations	a. 16,332 b. 3,234 c. 1,156	5,499 2,205 231	17.8 3.5 1.3	22.3 9.0 .9
Among which:				
University and higher . . . . .	65	467	.1	1.9
teachers-rectors, normal school, middle school and head-teachers .	1,742	1,076	1.9	4.4
Elementary teachers . . . . .	13,467	2,198	14.7	8.9
Other teachers . . . . .	116	73	.1	.3
F. Without occupation . . . . .	4,249	1,657	4.6	6.7
Total A-F	a. 73,623 b. 10,389 c. 7,631	17,477 5,466 1,707	80.4 11.3 8.3	70.9 22.2 6.9
Total . . . . .	91,643	24,650	100.0	100.0

In order to judge the elementary teacher of the Prussian *Volksschule* it is interesting and necessary to know from what kind of home he or she has come. Fortunately such information is not so hard to obtain in Prussia as in America, and that which is obtainable is reliable and not

Origin of  
Teachers

merely based upon the word of the individual teacher, who is very apt to give the calling of father quite a little higher than it really is. Among the men teachers in 1911 a little over 30% came from families whose fathers were employed in some kind of farming, forestry, or fishing; over 27% from homes where the father was occupied in mining, smelting, industry, or building; something over 13% whose fathers were in business of some kind; 22.6% came from families where the father was employed in some kind of public service, chiefly that of teaching in the *Volksschulen*. The fathers of about 5% were unemployed or pensioned. Less than 1% were children of day laborers or servants. Among the women teachers the percentages were respectively 13.2%, 26%, 21.7%, 32.2%, 6.7%, and .2%. Thus we see a very large percentage of teachers come from rural homes, and practically all from the so-called middle class.

## CHAPTER X

### TEACHERS' SALARIES

IN the constitutional charter of 1850, Article 25, we read: "The state guarantees the teachers in the *Volksschulen* a fixed income which corresponds to local conditions. In-  
struction in the public *Volksschulen* is given free." Salary  
Laws  
Just in what manner this clause was to be carried out was never indicated, for the general school law proposed in this charter has never been passed. Consequently the several provinces paid their teachers on the basis of their own individual salary laws, or the administrative counties were allowed to regulate this question to suit themselves. Nevertheless the nineteenth century saw a great material improvement in the matter of teachers' salaries. Knabe,<sup>1</sup> in discussing the increase in salaries, gives a table showing the average yearly income of teachers from 1821 till 1901. The increase in cities up to 1901 was over two hundred per cent and is now still more, due to the new salary law of 1909, while the salaries of country school-teachers were multiplied by more than 6. These figures do not correspond exactly to those of the official records but approximate them closely.

AVERAGE INCOME OF TEACHERS

	1821	1861	1871	1891	1901
Cities . . . . .	\$159	\$211	\$260	\$425	\$544
Country . . . . .	64	137	169	313	402
Both . . . . .	80	159	199	354	458

<sup>1</sup> *Das deutsche Unterrichtswesen*, p. 17.

It is also interesting to compare the increase in male teachers' and female teachers' salaries in Prussia since 1886. The very marked increase from 1906 to 1911 is due to the new salary scale put in force in 1909. The following table gives the *average* income of men and women teachers both in the city and in the country.<sup>1</sup>

YEAR	MEN TEACHERS		WOMEN TEACHERS	
	City	Country	City	Country
1886	\$408 <sup>2</sup>	\$283	\$304	\$238
1891	453	316	315	254
1896	507	339	340	283
1901	595	410	393	320
1906	640	425	421	330
1911	804	600	500	406

The average salary serves only to show the general tendency of increase and it gives a very imperfect picture of actual salaries paid. For example, a very few highly paid teachers can bring the *average* salary rather high, but this average will not give us any idea of what most of the teachers receive. The following tables give the reader after a brief glance a very definite idea of the range of salaries and the number of teachers receiving such salaries and at what period of service these salaries are received. The form of these tables can also be commended to American administrators in reporting accurately salaries *actually* paid. Salary scales will be given later.

<sup>1</sup> Figures based on statistics taken from the *Statistische Jahrbücher für den preussischen Staat*, for the years immediately following the dates given. Also found in *Schulstatistische Blätter*, vol. XI, No. 8, p. 77.

<sup>2</sup> A dollar has been taken to equal 4 marks, though its value is about 4.20 M.



## TEACHERS' SALARIES

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INCOME OF TEACHERS (MALE) IN PRUSSIA IN CITIES, 1911, ACCORDING TO YEARS OF SERVICE

TOTAL INCOME	YEARS OF SERVICE LESS THAN 4	4-5	6-7	8-10	11-13	14-15	16	17-19	20	21-22	23-25	26-28	29-30	31	32-39	40-49	ABOVE 50	TOTAL	PER CENT
Under \$300 .	26	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	28	0.08
\$301-325 .	87	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	91	0.26
326-350 .	312	20	10	1	—	—	—	—	—	—	—	—	—	—	—	—	—	345	0.97
351-375 .	493	23	8	1	—	—	—	—	—	—	—	—	—	—	—	—	—	526	1.43
376-400 .	330	38	2	3	1	—	—	—	—	—	—	—	—	—	—	—	—	394	1.11
401-425 .	303	87	127	17	—	—	—	—	—	—	—	—	—	—	—	—	—	534	1.51
426-450 .	48	106	215	41	3	—	—	—	—	—	—	—	—	—	—	—	—	413	1.17
451-475 .	46	93	273	151	13	1	—	—	—	—	—	—	—	—	—	—	—	577	1.63
476-500 .	25	104	300	267	43	—	1	2	—	—	—	—	—	—	—	—	—	800	2.26
500-550 .	25	75	313	919	305	46	—	—	—	—	—	—	—	—	—	—	—	1,745	4.93
550-600 .	17	44	185	702	902	214	67	11	—	1	—	—	—	—	—	—	—	2,143	6.05
601-650 .	8	35	294	611	689	488	275	125	3	—	—	—	—	—	—	—	—	2,529	7.14
651-700 .	5	3	26	306	835	370	186	584	70	30	5	1	—	—	—	—	—	2,513	7.09
701-750 .	4	2	4	565	547	549	308	555	211	343	105	8	16	—	—	—	—	3,201	9.04
751-825 .	3	2	3	10	543	630	326	1068	222	386	802	225	3	—	—	—	—	4,309	12.17
826-900 .	—	2	1	3	28	117	68	747	229	538	484	749	381	117	86	24	—	3,574	10.09
901-975 .	—	1	1	2	9	58	41	216	170	344	638	446	255	92	919	319	11	3,523	9.95
176-1050 .	—	—	—	—	1	12	9	122	71	138	360	558	353	160	428	164	7	2,386	6.74
1051-1125 .	1	—	—	—	—	3	—	14	28	96	236	289	228	75	756	253	10	1,990	5.62
1126-1200 .	—	—	—	—	—	—	1	10	12	35	108	219	230	123	354	133	5	1,230	3.47
1201-1275 .	—	—	—	—	—	1	—	6	2	12	60	110	120	60	626	194	8	1,206	3.4
1276-1350 .	—	—	—	—	1	—	—	3	4	16	13	94	74	31	259	138	4	628	1.77
1351-1425 .	—	—	—	—	—	—	—	—	—	6	24	9	24	18	105	72	5	324	0.92
1426-1500 .	—	—	—	—	—	—	—	6	2	—	14	39	38	16	50	10	—	175	0.49
Over \$1500 .	—	—	—	—	—	—	—	—	1	3	9	20	13	2	135	47	5	235	0.66
Total .	1,734	639	1,843	3,701	3984	2489	1285	3469	1025	1049	2018	2767	1732	704	3771	1354	55	35,410	99.95
Percentage	4.89	1.80	5.20	10.44	11.24	7.02	3.65	9.79	2.89	5.50	8.23	7.81	4.89	1.98	10.67	3.82	0.15	99.97	

INCOME OF TEACHERS (MALE) IN THE PRUSSIAN VOLKSSCHULEN IN THE COUNTRY, 1911,  
ACCORDING TO YEARS OF SERVICE

	Under 4	4-5	6-7	8-10	11-13	14-15	16	17-19	20	21-22	23-25	26-28	29-30	31	32-39	40-49	Over 50	TOTAL	PER CENT
Under \$300 .	2,145	112	67	6	1	—	—	—	—	—	—	—	—	—	—	—	—	2,331	4.15
\$301-325 .	4,210	210	120	15	1	—	—	—	—	—	—	—	—	—	—	—	—	4,556	8.10
326-350 .	3,795	277	143	17	—	—	—	—	—	—	—	—	—	—	—	—	—	4,232	7.53
351-375 .	2,220	411	418	33	3	—	—	—	—	—	—	—	—	—	—	—	—	3,085	5.49
376-400 .	1,310	562	848	75	3	—	—	—	—	—	—	—	—	—	—	—	—	2,998	4.98
401-425 .	487	524	979	321	16	1	—	—	—	—	—	—	—	—	—	—	—	2,328	4.14
426-450 .	201	297	581	864	46	3	—	—	—	—	—	—	—	—	—	—	—	1,992	3.54
451-475 .	105	187	447	1104	169	8	1	—	—	—	—	—	—	—	—	—	—	2,021	3.60
476-500 .	51	92	283	670	587	42	2	—	—	—	—	—	—	—	—	—	—	1,729	3.07
501-525 .	24	38	221	1020	1443	273	51	19	2	—	—	—	—	—	—	—	—	3,092	5.50
526-550 .	6	7	65	403	883	895	405	150	5	1	2	2	1	—	—	—	—	2,826	5.03
551-600 .	2	1	17	159	543	605	329	773	55	11	3	—	—	—	—	—	—	2,499	4.44
601-650 .	1	2	4	55	212	384	221	1036	259	402	63	3	1	—	—	—	—	2,644	4.70
651-700 .	—	—	—	12	26	114	83	446	239	459	1270	55	4	2	—	—	—	2,618	4.66
701-750 .	—	—	—	4	27	22	18	184	76	225	683	1088	153	17	16	2	—	4,067	7.23
751-825 .	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9	8.79
826-900 .	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	28	8.01
901-975 .	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14	4.13
976-1050 .	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	1.58
1051-1125 .	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	0.68
1126-1200 .	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	0.45
1201-1275 .	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	63	0.11
1276-1350 .	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	33	0.06
1351-1425 .	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10	0.02
1426-1500 .	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8	0.01
Over 1500 .	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total .	14,560	2720	4195	4782	4076	2510	1220	3251	992	2010	3143	3267	2123	1021	4836	1455	63	56,224	99.94
Percentage	25.89	4.83	7.46	8.50	7.25	4.46	2.17	5.78	1.76	3.57	5.59	5.81	3.77	1.81	8.60	2.58	0.11	—	99.94

## TEACHERS' SALARIES

191

INCOME OF TEACHERS (FEMALE) IN THE PRUSSIAN VOLKSSCHULEN IN THE CITIES, 1911,  
ACCORDING TO YEARS OF SERVICE

	UNDER 4	4-5	6-7	8-10	11-13	14-15	16	17-19	20	21-22	23-25	26-28	29-30	31	32-39	40-49	OVER 50	TOTAL	PER CENT
Under \$225 .	15	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19	0.11
\$226-237 .	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	0.01
238-250 .	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18	0.11
251-262 .	82	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	84	0.52
263-275 .	44	1	2	1	—	—	1	—	—	—	—	—	—	—	—	—	—	49	0.30
276-287 .	70	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	72	0.45
288-300 .	214	4	3	2	—	—	—	—	—	—	—	—	—	—	—	—	—	224	1.41
301-312 .	144	3	11	5	1	—	—	—	1	—	—	—	—	—	—	—	—	166	1.04
313-325 .	249	9	5	6	1	—	—	1	—	—	—	—	—	—	—	—	—	265	1.67
326-337 .	297	23	25	2	2	—	—	—	—	—	—	—	—	—	—	—	—	354	2.23
338-350 .	381	54	78	12	3	2	—	1	—	—	—	—	—	—	—	—	—	531	3.34
351-362 .	600	75	81	47	10	2	—	—	—	—	—	—	—	—	—	—	—	815	5.13
363-375 .	176	46	79	63	12	3	—	—	—	1	—	—	—	—	—	—	—	381	2.40
376-400 .	475	204	297	156	72	6	2	3	—	1	—	—	—	—	—	—	—	1,218	7.67
401-425 .	377	337	414	341	138	27	5	5	1	2	—	—	—	—	—	—	—	1,548	9.75
426-450 .	182	99	248	381	246	58	30	8	1	1	—	—	—	—	—	1	—	1,259	7.93
451-475 .	54	32	70	345	296	120	34	48	1	3	6	1	—	1	—	—	—	1,012	6.38
476-500 .	35	44	129	162	321	146	51	70	9	18	5	5	—	—	2	—	—	908	6.29
501-550 .	33	63	205	279	199	255	136	280	74	87	48	15	2	—	7	—	—	1,683	10.61
551-600 .	1	7	38	293	139	43	235	105	105	151	204	69	26	10	39	13	—	1,603	10.10
601-650 .	—	—	2	21	87	71	58	159	48	116	185	140	57	19	38	3	—	1,004	6.33
651-700 .	—	—	—	—	8	52	28	89	42	78	91	187	112	29	146	23	—	885	5.58
701-750 .	—	—	—	—	1	6	1	66	34	94	135	98	74	53	191	19	1	773	4.87
751-825 .	—	—	—	—	—	—	—	5	8	13	52	152	100	38	219	28	1	616	3.88
826-900 .	—	—	—	—	—	—	—	—	—	—	2	10	10	17	103	23	1	226	1.42
901-975 .	—	—	—	—	—	—	—	—	—	—	—	—	7	5	34	7	2	55	0.34
975-1050 .	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—	1	0.01
Total .	3449	904	1690	2052	1690	887	391	970	324	565	731	680	393	172	840	118	5	15,861	99.88
Percentage	21.74	5.69	10.65	12.93	10.65	5.59	2.46	6.11	2.04	3.56	4.60	4.28	2.47	1.08	5.29	0.70	0.03		99.87

## PRUSSIAN ELEMENTARY SCHOOLS

INCOME OF TEACHERS (FEMALE) IN THE PRUSSIAN VOLKSSCHULEN IN THE COUNTRY, 1911,  
ACCORDING TO YEARS OF SERVICE

YEARS OF SERVICE	UNDER 4	4-5	6-7	8-10	11-13	14-15	16	17-19	20	21-22	23-25	26-28	29-30	31	32-39	40-49	OVER 50	TOTAL	PER CENT
Under \$225	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	0.01
\$226-237	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	0.02
238-250	40	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	41	0.46
251-262	83	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	92	1.04
263-275	161	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	161	1.83
276-287	269	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	278	3.16
288-300	320	3	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	336	3.82
301-312	443	23	10	3	1	—	—	—	—	—	—	—	—	—	—	—	—	480	5.41
313-325	544	31	36	4	1	—	1	—	—	—	—	—	—	—	—	—	—	617	7.02
326-337	491	34	37	10	2	—	—	—	—	—	—	—	—	—	—	—	—	574	6.53
338-350	358	94	149	23	2	2	—	—	—	—	—	—	—	—	—	—	—	628	7.14
351-362	365	139	198	54	12	1	—	—	—	—	—	—	—	—	—	—	—	769	8.75
363-375	197	92	101	132	21	1	—	—	—	1	—	—	—	—	—	—	—	546	6.21
376-400	350	165	260	217	103	9	1	—	—	—	—	—	—	—	—	—	—	1105	12.57
401-425	77	65	131	186	149	23	3	1	1	—	—	—	—	—	—	—	—	637	7.24
426-450	35	17	24	135	108	71	28	19	—	—	—	—	2	—	1	—	—	440	5.00
451-475	13	6	17	25	125	55	20	36	3	1	—	—	—	—	—	—	—	391	3.42
476-500	14	9	12	10	15	43	17	64	9	10	2	—	—	—	1	—	—	266	2.34
501-550	3	6	4	27	19	29	19	104	45	92	60	10	—	—	—	—	—	418	4.75
551-600	—	—	1	4	17	4	10	19	21	62	89	97	10	1	5	—	—	340	3.86
601-650	—	—	—	3	2	1	2	7	2	11	56	78	80	35	51	2	—	330	3.75
651-700	—	—	—	—	—	—	—	3	1	3	10	34	29	24	29	53	2	388	5.51
701-750	—	—	—	—	—	—	—	—	—	4	2	6	5	5	55	4	1	82	0.93
751-825	—	—	—	—	—	—	—	—	—	—	—	1	5	—	10	1	—	17	0.19
Total	3775	696	990	834	577	239	101	253	82	185	220	226	131	65	352	60	3	8789	99.95
Percentage	42.95	7.92	11.26	9.48	6.56	2.71	1.14	2.87	.93	2.10	2.50	2.57	1.49	.73	4.00	0.68	0.03		99.92

## TEACHERS' SALARIES

193

INCOME OF TEACHERS (MALE) IN THE PRUSSIAN VOLKSSCHULEN IN CITIES, 1911, ACCORDING TO AGE

	UNDER 20										OVER 70										TOTAL	PER CENT	
	20	20-23	24	25-26	27-29	30-32	33-34	35	36-38	39	40-41	42-44	45-47	48-49	50	51-54	55-59	60-64	65-70	70			
Under \$300	1	20	2	3	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	28	0.08	
\$301-325	2	77	5	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	91	0.26	
326-350	2	270	31	31	6	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	345	0.97	
351-375	12	391	71	36	9	4	1	1	—	—	—	—	—	—	—	—	—	—	—	—	526	1.43	
376-400	11	245	64	51	17	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	394	1.11	
401-425	—	219	83	161	63	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	534	1.51	
426-450	1	21	58	214	103	13	—	—	3	—	—	—	—	—	—	—	—	—	—	—	413	1.17	
451-475	—	13	54	233	221	48	1	2	2	—	—	—	—	—	—	—	—	—	—	—	577	1.63	
476-500	—	6	65	304	320	88	5	5	7	—	—	—	—	—	—	—	—	—	—	—	800	2.26	
501-550	—	2	32	231	819	486	142	8	10	8	5	1	—	—	—	—	—	—	—	—	1,745	4.93	
551-600	—	1	15	137	597	861	349	94	77	3	3	2	1	2	—	—	—	—	—	—	2,143	6.05	
601-650	—	1	20	210	501	649	476	283	298	135	84	31	4	—	—	2	—	—	—	—	2,529	7.14	
651-700	—	—	—	—	—	312	694	488	595	135	84	31	4	—	—	3	—	—	—	—	2,513	7.09	
701-750	—	—	—	—	—	400	576	459	650	173	341	218	42	6	1	2	2	—	—	—	3,201	9.04	
751-825	—	—	—	—	6	399	550	310	1086	251	397	710	483	90	11	12	3	1	—	—	4,399	12.17	
826-900	—	—	—	—	—	16	94	46	645	200	483	476	724	481	146	182	51	20	9	—	3,574	10.09	
901-975	—	—	—	—	—	2	42	44	178	97	281	516	596	297	94	526	505	239	90	16	3,523	9.95	
976-1050	—	—	—	—	—	1	4	9	106	49	115	247	504	438	157	338	246	121	43	8	2,386	6.74	
1051-1125	—	—	—	—	—	—	—	—	—	10	17	81	172	283	225	87	413	401	225	65	7	1,990	5.62
1126-1200	—	—	—	—	—	—	—	—	6	9	30	67	223	239	96	217	195	107	36	5	1,230	3.47	
1201-1275	—	—	—	—	—	—	—	2	3	1	8	42	100	109	55	346	339	125	66	9	1,206	3.40	
1276-1350	—	—	—	—	—	—	—	—	2	5	12	12	70	75	39	118	143	105	40	7	628	1.77	
1351-1425	—	—	—	—	—	—	—	—	—	—	6	18	14	22	7	83	88	52	30	4	324	0.92	
1426-1500	—	—	—	—	—	—	—	—	—	3	1	12	33	37	20	26	27	7	6	—	175	0.49	
Over \$1,500	—	—	—	—	—	—	—	—	—	—	4	6	17	15	2	74	67	32	14	4	235	0.66	
Total	30	1266	500	1618	3438	3848	2616	1301	3684	968	1865	2535	3994	2036	715	2343	2069	1034	399	60	35419	99.95	
Percentage	.08	3.57	1.41	4.56	9.70	10.86	7.38	3.67	10.40	2.73	5.26	7.15	8.73	5.74	2.01	6.61	5.84	2.91	1.12	.17		99.90	

## PRUSSIAN ELEMENTARY SCHOOLS

INCOME OF TEACHERS (MALE) IN THE PRUSSIAN VOLKSSCHULEN IN THE COUNTRY, 1911,  
ACCORDING TO AGE

INCOME		YEARS OF AGE	UNDER																			
20	20-23	24	25-26	27-29	30-32	33-34	35	36-38	39	40-41	42-44	46-47	48-49	50	51-54	55-59	60-64	65-70	OVER	TOTAL	PER CENT	
29	1,750	284	213	52	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2,331	4.15	
55	3,497	523	371	97	7	1	1	2	—	—	—	—	1	—	—	1	—	—	—	4,556	8.10	
82	3,007	580	419	122	11	5	1	2	—	2	—	—	—	—	—	—	—	—	—	4,232	7.53	
50	1,713	466	619	205	24	4	1	2	—	—	—	—	—	—	1	—	—	—	—	3,085	5.49	
12	940	438	954	418	20	7	3	2	1	1	2	—	—	—	—	—	—	—	—	2,998	4.98	
—	281	347	930	658	99	5	1	4	1	—	1	1	—	—	—	—	—	—	—	2,328	4.14	
1	108	159	492	808	310	17	1	2	1	—	—	—	—	—	1	—	—	—	—	1,992	3.54	
1	51	114	364	1012	422	41	4	8	—	—	3	—	—	—	—	—	—	—	—	2,021	3.60	
—	32	48	223	540	612	230	22	15	—	4	2	—	—	—	—	—	—	—	—	1,729	3.07	
13	13	16	124	789	1257	618	115	137	7	3	6	3	1	1	1	1	—	—	—	3,092	5.50	
—	—	—	5	7	279	725	436	569	18	20	7	7	2	1	2	1	—	—	—	2,826	5.03	
—	—	—	—	93	411	494	308	885	158	100	30	6	4	2	1	—	—	—	—	2,499	4.44	
—	—	—	—	30	167	264	228	908	280	478	247	22	8	1	6	3	—	—	—	2,644	4.70	
—	—	—	—	1	91	106	69	447	200	555	699	372	47	6	8	3	—	—	—	2,618	4.66	
—	—	—	—	14	91	106	69	447	200	555	699	372	47	6	8	3	—	—	—	4,067	7.23	
—	—	—	—	1	7	23	88	358	168	416	861	1307	579	79	94	15	3	—	—	4,942	8.79	
—	—	—	—	1	1	19	25	12	153	54	169	442	917	918	497	993	482	180	67	12	4,506	8.01
—	—	—	—	—	—	1	18	11	51	28	83	162	400	507	295	1134	1164	492	128	30	4,322	4.13
—	—	—	—	—	—	1	3	2	28	14	31	99	177	208	120	637	601	282	108	11	2,322	4.13
—	—	—	—	—	—	—	2	3	4	9	52	81	100	60	216	220	102	30	6	—	886	1.58
—	—	—	—	—	—	—	1	6	1	5	7	45	63	22	94	85	40	12	1	383	0.68	
—	—	—	—	—	—	—	1	3	2	10	3	9	23	12	60	64	40	26	1	253	0.45	
—	—	—	—	—	—	—	—	—	—	5	6	5	3	—	15	16	7	6	—	63	0.11	
—	—	—	—	—	—	—	—	—	—	—	2	10	3	2	3	3	6	3	1	33	0.06	
—	—	—	—	—	—	—	—	—	—	—	—	—	4	—	2	2	2	—	—	10	0.02	
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	4	1	—	—	8	0.01	
230	11,392	2080	4750	5216	4204	2650	1286	3585	937	1889	2633	3363	2473	1098	3270	2667	1156	383	62	56,224	99.94	
41	20.26	5.30	8.44	9.27	7.47	4.71	2.28	6.37	1.66	3.36	4.68	5.98	4.40	1.95	5.81	4.74	2.05	.68	.10	—	99.93	

## TEACHERS' SALARIES

195

INCOME OF TEACHERS (FEMALE) IN THE PRUSSIAN VOLKSSCHULEN IN CITIES, 1911,  
ACCORDING TO AGE

	20	20-23	24	25-26	27-29	30-32	33-34	35	36-38	39	40-41	42-44	45-47	48-49	50	51-54	55-59	60-64	65-69	OVER 70	TOTAL	PER CENT
Under \$225	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19	0.11
\$225-237	—	15	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	0.01
238-250	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	18	0.11
251-262	—	12	59	3	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	84	0.52
263-275	—	1	31	2	5	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	49	0.30
276-287	—	6	36	8	10	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	72	0.45
288-300	—	18	135	12	21	17	5	2	4	—	—	—	—	—	—	—	—	—	—	—	224	1.41
301-312	—	3	70	18	18	16	13	7	6	3	3	4	—	—	—	—	—	—	—	—	106	1.04
313-325	—	7	168	22	26	18	12	—	3	4	2	1	1	—	—	—	—	—	—	—	265	1.67
326-337	—	12	183	33	34	30	31	7	4	6	1	2	4	1	—	—	—	—	—	—	354	2.23
338-350	—	19	225	62	69	69	34	18	11	1	2	4	1	1	1	—	—	—	—	—	531	3.34
351-362	—	32	434	50	88	65	53	25	7	26	6	8	6	4	—	—	—	—	—	—	815	5.13
363-375	—	2	93	25	53	60	54	39	7	21	8	6	7	3	2	—	—	—	—	—	381	2.40
375-400	—	1	240	156	205	131	72	21	48	8	11	20	6	9	1	8	3	—	—	—	1218	7.67
401-425	—	—	229	173	310	348	182	83	41	72	15	32	25	18	8	2	9	1	—	—	1,548	9.75
426-450	—	—	77	72	200	313	216	126	44	85	19	33	27	19	7	5	9	3	—	—	1,559	9.93
451-475	—	—	36	13	24	255	245	112	57	114	21	39	46	19	10	6	10	5	—	—	1,012	6.38
476-500	—	—	19	28	86	131	238	153	55	116	20	33	46	37	14	9	13	6	—	—	998	6.29
501-550	—	—	6	16	130	267	173	197	124	269	56	113	124	75	42	15	30	23	—	—	1,683	10.61
551-600	—	—	—	—	106	243	171	80	257	77	109	171	137	65	27	68	58	23	—	—	1,603	10.10
601-650	—	—	—	—	—	18	36	45	155	60	46	110	172	152	97	35	74	42	—	—	1,004	6.33
651-700	—	—	—	—	—	5	3	7	60	34	71	105	203	101	39	101	110	31	—	—	885	5.58
701-750	—	—	—	—	—	—	—	—	8	9	45	119	129	111	60	150	96	39	—	—	773	4.87
751-825	—	—	—	—	—	—	—	—	5	2	9	6	105	79	47	155	142	56	—	—	616	3.88
826-900	—	—	—	—	—	—	—	—	—	—	1	1	12	7	7	69	81	38	—	—	226	1.42
901-975	—	—	—	—	—	—	—	—	—	—	—	—	—	4	—	21	18	7	—	—	55	0.34
975-1050	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	0.01
Total	114	2069	696	1339	1922	1659	1061	516	1265	328	628	889	926	593	256	740	593	234	56	7	15,801	99.88
Percentage	.71	13.04	4.38	8.44	12.11	10.45	6.68	3.25	7.97	2.06	3.95	5.60	5.83	3.55	1.61	4.66	3.73	1.47	.35	.04		99.88





A careful study of these tables gives us something more than an idea of the salaries actually paid. First of all, we are struck by the length of service of a large percentage of the teachers. Of male teachers in the cities more than **Length of Service** 45 per cent have been in the service for more than twenty years and only 6.69 per cent have had less than six years' experience, while 77.67 per cent have served more than ten years. In the country 25.89 per cent of the male teachers have taught less than four years. It is the policy of the government to send the young teachers to country schools for the first few years following graduation from the normal school and before the time of permanent appointment, which fact accounts for the rather large number of young teachers in the country. As soon as the teachers have passed their second examination, they apply for positions in cities, thus making room again for young teachers in the rural communities. Although we find a larger percentage of teachers of few years' experience in the rural schools than in city schools, over 53 per cent of all men teachers in the country have taught more than ten years.

As a rule the women teachers both in the city and in the country are younger in the service than the men. In cities 21.74 per cent of women teachers have taught less than **Women Teachers** four years, and 51.01 per cent have taught less than ten years, as compared with 6.69 per cent and 22.33 per cent respectively among the men. The women apparently drift from rural districts to cities as soon as possible or they leave the service entirely, for we find that 42.95 per cent of them have served less than four years, while more than 71 per cent have taught less than ten years.

Practically none of the German elementary teachers are under twenty years of age. Of the male teachers in cities 19.24 per cent are between twenty and thirty years; 35.04 per cent are between thirty and forty; while the remainder, over 45 per

cent, are over forty years of age. In the country among men teachers 25.97 per cent are under twenty-five years; 40.20 per cent are between twenty-five and forty, while the remaining 33.83 per cent are over forty. Among women teachers 18.14 per cent are under the age of twenty-five; a little over 50 per cent are between twenty-five and forty years. In rural districts, 40.59 per cent of the women teachers are under twenty-five years, and 40.61 per cent are between twenty-five and forty years of age.

The tables given in this chapter show the distribution of salaries of rural and city school-teachers of the Prussian elementary schools. In cities the upper 55 per cent of the male teachers receive a yearly salary of more than seven hundred and fifty dollars (\$750), while in rural sections 50.50 per cent of the men receive more than five hundred and fifty dollars (\$550). Of the country women teachers 49.56 per cent receive a yearly income of over \$375. One notes the decided advantage men have over women in the matter of salaries in cities, for 50 per cent of the men receive over \$550, far above the median salary in the women's scale. In the cities, 49.42 per cent of the women have salaries higher than \$475, also considerably lower than the median salary for men in cities.

While the salaries paid to Prussian elementary teachers are by no means high, they are higher than American salaries in corresponding schools if we consider all of our elementary schools, in that there is a larger percentage of German teachers than of American teachers receiving over \$750.

Some improvement was made in the matter of salaries of the teachers of the *Volksschulen* from 1851 to 1897. In 1873 the state insured to the teachers increases based on length of service. Also by the laws of 1888 and 1889 concerning the lightening of the school expenditures on the part of the local communities, the general average of salaries was increased.

The most important law concerning teachers' incomes was that <sup>1</sup> of March 3, 1897. This law assured to every teacher a fixed, fundamental, or base salary, and in addition thereto, increases based on age, and free lodgings, or a corresponding compensation for rent. The salaries were very materially increased by this law, and still more so by the new one of May 26, 1909, which retained the principles of the law of 1897, but instead of making the fundamental salary a minimum, it made it the normal salary for all teachers, in addition to which there are several other units which make up the final salary.

The income of a teacher in the Prussian *Volksschule*, after he or she has been permanently appointed, consists of a fundamental salary, of successive increases based on length of service, and free lodgings or compensation therefor. The Final Salary <sup>2</sup>

In some cases, as is shown below, increments are granted to cover local conditions; and some teaching positions, such as those of the principal or of a teacher in the *Hilfsschule*, have extra salary attached to them. The fundamental salary is 1400 M. yearly for men and 1200 M. yearly for women. Physical training, cooking, and household arts teachers may receive a smaller base salary than the ordinary teacher, but it must not be less than 1100 M. for men or 1000 M. for women. Temporarily appointed teachers or those who have been in the service less than four years receive a fundamental salary of one fifth less than ordinary teachers. In cases where teachers fill positions which combine church and school offices, the salary is somewhat higher than that given above.

The first additional salary element is one granted for length of service. This increment is called an *Alterszulage*. There are nine such increments, the first being granted after seven years

<sup>1</sup> Gesetz, betreffend das Diensteinkommen der Lehrer und Lehrerinnen an den öffentlichen Volksschulen.

<sup>2</sup> *Lehrerbesoldungsgesetz*, p. 74. Heinze, *Im Amt*, Goslar, 1913.

of service, and the remaining eight, after intervals of three years each. The maximum salary is reached then in  $(7 + (8 \times 3) = 31)$

Service thirty-one years, or generally in the fifty-first year  
 Increment of the teacher's life, since most of the teachers begin at twenty. The first two increments for men are 200 M. yearly, the third and fourth each 250 M., and the remaining five are 200 M. each. For the women each of the first two increments is 100 M., and the others are 150 M., yearly. These increments tabulated appear as follows:

AFTER 7 YEARS' SERVICE	MEN	WOMEN
After 7 years' service . . . . .	200 M. = \$50	100 M. = \$25
After 10 years' service . . . . .	400 M. = 100	200 M. = 50
After 13 years' service . . . . .	650 M. = 162	350 M. = 87
After 16 years' service . . . . .	900 M. = 225	500 M. = 125
After 19 years' service . . . . .	1100 M. = 275	650 M. = 162
After 22 years' service . . . . .	1300 M. = 325	800 M. = 200
After 25 years' service . . . . .	1500 M. = 375	950 M. = 237
After 28 years' service . . . . .	1700 M. = 425	1100 M. = 275
After 31 years' service . . . . .	1900 M. = 475	1250 M. = 312

Thus far there have been mentioned two elements of the final salary, the base and the service increment, which together would amount after thirty-one years' service to 1400 M. plus 1900 M. = 3300 M., and 1200 M. plus 1250 M. = 2450 M., for men and women respectively.

The next factor going to make up the salary of the teacher is the *Mietsentschädigung*, which means compensation for rent.

The teacher either receives free lodgings or a sum of money in lieu thereof. All cities, towns, and villages are grouped into five classes, A, B, C, D, and E, each *Mietsentschädigung*<sup>1</sup> place according to the cost of living and other local

<sup>1</sup> Up to this point the salary is composed of three parts, the base salary, the service increment, and the rental compensation.

conditions which prevail. The following table will show the amounts paid yearly in the various classes :

TYPE OF COMMUNITY	MEN	WOMEN
Community in Class A not less than . . .	800 M.	560 M.
Community in Class B not less than . . .	630 M.	470 M.
Community in Class C not less than . . .	520 M.	390 M.
Community in Class D not less than . . .	450 M.	330 M.
Community in Class E not less than . . .	330 M.	250 M.

These amounts are, of course, the minima, and in many places the teachers receive more.<sup>1</sup> Temporarily employed or unmarried teachers without a household establishment of their own, or teachers who have been less than four years in the service, receive a rental compensation of one third less than regular teachers. A great many unmarried teachers establish bachelor apartments and in this way entitle themselves to the extra compensation. All of the rental compensation is not reckoned in with the other units of the salary, when the pension is granted, but only the average of the five classes.

The next factor is the local increment, or *Ortszulage*, which all teachers receive in places where it is permitted to be granted. This increment is given to meet extraordinary local conditions. School communities (*Schulverbände*) in which previous to January 1, 1909, the fundamental salary and the service increment for ordinary teachers amounted to 2800 M., or school communities in which the final salary was more than 4000 M., are permitted to grant a local increment of not more than 900 M. for men, and 600 M. for women. Cities which form a district for themselves are also allowed to grant these increments. This increment, as the service incre-

Local In-  
crement,  
*Ortszulage*

<sup>1</sup> Principals and head teachers of schools of six or more than six successive classes receive a larger rental than other teachers.

ment, is generally a progressive one, based on length of service. The local increments must not increase the former final salary, that existing before 1909, exclusive of the *Amtszulage* (see below), beyond 4200 M. for men and 2950 M. for women. It is seen, then, that every teacher in the Prussian *Volksschulen* does not receive this local increment, and this increment is not the same in all places, but that it is given to meet varying local conditions. The fundamental salary and the service increments are the same for all teachers, while the rental compensation and the local increments vary with the community. As a rule, the last two units are largest in the large cities where living expenses are the highest.

Some teaching positions have another increment attached to them. Directors of schools, whether they be principals, head teachers, first teachers, or teachers who conduct a school alone, receive what is known as a yearly *Amtszulage* (office increment). Ordinary teachers do not receive such increments. Section 24 of the salary law of 1909 reads:

Directors of schools with six or more successive classes receive a pensionable bonus or increment of at least 700 M. yearly. Directresses of the same kinds of schools receive an increment of at least 500; and other directors and directresses one of at least 200 M. yearly. . . . First teachers in schools for which no director has been appointed and teachers of one-class schools are granted a yearly bonus of 100 M. Also teachers of abnormal children receive an *Amtszulage*.

Thus we see how the salary of a Prussian elementary teacher is made up of its different factors. The salary is constituted in this way in order to equalize the incomes of teachers living under greatly varying circumstances. This equalization is brought about by means of the rental increment and the local increment. The former is constant as far as the length of service is concerned, but varies with the community, while the latter

varies with the community and generally with the length of service.

The following tables are the salary scales now in force in Stettin, in Pomerania :

SALARIES OF MARRIED MEN TEACHERS IN THE  
(VOLKSSCHULEN) OF STETTIN

YEARS OF SERVICE	BASE SALARY	RENTAL INCREMENT	SERVICE INCREMENT	LOCAL INCREMENT	TOTAL SALARY
1-4 years . . .	1120 M.	470 M.	—	100 M. =	1690 M.
5-7 years . . .	1400 M.	650 M.	—	100 M. =	2150 M.
8-10 years . . .	1400 M.	650 M.	200 M.	100 M. =	2350 M.
11-13 years . . .	1400 M.	650 M.	400 M.	250 M. =	2700 M.
14-16 years . . .	1400 M.	650 M.	650 M.	250 M. =	2950 M.
17-19 years . . .	1400 M.	650 M.	900 M.	250 M. =	3200 M.
20-22 years . . .	1400 M.	650 M.	1100 M.	300 M. =	3450 M.
23-25 years . . .	1400 M.	650 M.	1300 M.	300 M. =	3650 M.
26-28 years . . .	1400 M.	650 M.	1500 M.	400 M. =	3950 M.
29-31 years . . .	1400 M.	650 M.	1700 M.	400 M. =	4150 M.
32 and above . . .	1400 M.	650 M.	1900 M.	500 M. =	4450 M.

Unmarried male teachers who do not have their own household receive a rental increment of 470 M. instead of 650 M. Otherwise their incomes are the same as those of the married teachers. A principal of a *Volksschule* in Stettin gets 825 M. for rental compensation as compared to 650 M. received by the ordinary teachers. The *Amtszulage* received by the principals in this city is 1000 M. yearly. The salaries of principals, then, are calculated on the same basis as salaries of teachers, but the principal receives 1000 M. yearly *Amtszulage*, which an ordinary teacher has no claim to, and also the principal receives 175 M. more rental compensation than a teacher does. Counting everything together, then, a principal in Stettin receives 1175 M. more than does a married male teacher of the same number of years of service. Head teachers in schools for mentally defi-

cient children receive a yearly bonus (*Amtszulage*) of 500 M., while ordinary teachers in such institutions receive 200 M. The table given above is merely to give the idea of how salaries are computed. The salaries paid in the city mentioned are about the lowest in Prussia in towns of over two hundred thousand population.

## SALARIES OF WOMEN TEACHERS IN STETTIN

YEARS OF SERVICE	BASE SALARY	RENTAL INCREMENT	SERVICE INCREMENT	LOCAL INCREMENT	TOTAL SALARY
1-7 years . . .	1200 M.	470 M.	—	—	= 1670 M.
8-10 years . . .	1200 M.	470 M.	100 M.	50 M.	= 1820 M.
11-13 years . . .	1200 M.	470 M.	200 M.	100 M.	= 1970 M.
14-16 years . . .	1200 M.	470 M.	350 M.	100 M.	= 2120 M.
17-19 years . . .	1200 M.	470 M.	500 M.	100 M.	= 2270 M.
20-22 years . . .	1200 M.	470 M.	650 M.	100 M.	= 2420 M.
23-25 years . . .	1200 M.	470 M.	800 M.	100 M.	= 2570 M.
26-28 years . . .	1200 M.	470 M.	950 M.	100 M.	= 2720 M.
29-31 years . . .	1200 M.	470 M.	1100 M.	100 M.	= 2870 M.
32 and after . . .	1200 M.	470 M.	1250 M.	100 M.	= 3020 M.

A very cursory inspection of the tables just given will convince the reader that the theory of equal pay has not made very marked progress in Germany. The schoolmistress is a comparatively new thing, but her numbers are gradually increasing in the *Volksschulen*. The theory that the same work when done by a man is worth more than when done equally well by a woman has never been attacked. The German school man says quite frankly, "Of course, a man teacher is better than a woman teacher," and that finishes the discussion. The writer believes that the presence of a large percentage of women in the *Volksschulen* of a city indicates an advance. . . The statistics show that where there is the largest percentage of women employed in the *Volksschulen*, there one will find the smallest number of pupils per teacher, and the greatest amount of money expended



per pupil, and that these school systems are generally pointed out as being the best in Germany.

Below are given at length tables taken from the Ministerial Order of July 20, 1912, which give a general idea of salaries paid in the various large cities of Germany, exclusive of the rental compensation. The first tables give the rental compensation as paid in the several provinces.

RENTAL COMPENSATION SCALE FOR THE SEVERAL PROVINCES  
FOR DIRECTORS OF SCHOOLS OF SIX OR MORE SUCCESSIVE  
CLASSES

PROVINCE	CLASSES OF LOCALITIES								AMOUNT OF RENTAL COMPEN- SATION SUBJ. TO PENSIONS
	A	B	C	D	E <sub>1</sub>	E <sub>2</sub>	E <sub>3</sub>	E <sub>4</sub>	
East Prussia . .	1000 M.	900 M.	700 M.	570 M.	470 M.	380 M.	300 M.	—	710 M.
West Prussia . .	900 M.	780 M.	640 M.	550 M.	460 M.	420 M.	320 M.	—	654 M.
Berlin . . . .	1000 M.	—	—	—	—	—	—	—	1000 M.
Brandenburg . .	1000 M.	850 M.	690 M.	600 M.	450 M.	350 M.	250 M.	—	698 M.
Pomerania . . .	1000 M.	825 M.	680 M.	580 M.	480 M.	420 M.	360 M.	—	701 M.
Posen . . . . .	—	850 M.	680 M.	550 M.	480 M.	380 M.	—	—	688 M.
Silesia . . . . .	920 M.	840 M.	670 M.	550 M.	500 M.	420 M.	320 M.	250 M.	670.5 M.
Saxony . . . . .	950 M.	850 M.	650 M.	600 M.	500 M.	450 M.	340 M.	250 M.	707 M.
Schleswig-Hol- stein . . . . .	900 M.	700 M.	630 M.	530 M.	480 M.	380 M.	—	—	638 M.
Hannover . . . .	880 M.	700 M.	620 M.	540 M.	480 M.	380 M.	280 M.	—	624 M.
Westphalia . . .	900 M.	750 M.	680 M.	580 M.	520 M.	420 M.	300 M.	—	666 M.
Hesse-Nassau . .	900 M.	800 M.	700 M.	580 M.	520 M.	440 M.	340 M.	260 M.	674 M.
Rhine Province .	900 M.	750 M.	680 M.	580 M.	520 M.	420 M.	—	—	676 M.

Each locality is placed in one of the classes into which its province is divided, and the figures given show the lowest rental compensation any locality assigned to that class can pay. The rental compensation plus the totals in the last column of table D gives the complete salary in twenty-seven of the largest cities in Prussia.

### RENTAL COMPENSATION SCALE FOR OTHER DIRECTORS AND MALE TEACHERS

PROVINCE	CLASSES OF LOCALITIES								AMOUNT OF RENTAL COMPENSATION-PENSION-ABLE
	A	B	C	D	E <sub>1</sub>	E <sub>2</sub>	E <sub>3</sub>	E <sub>4</sub>	
East Prussia . . .	800 M.	750 M.	600 M.	500 M.	400 M.	330 M.	250 M.	—	605 M.
West Prussia . . .	800 M.	630 M.	520 M.	450 M.	360 M.	320 M.	250 M.	—	542 M.
Berlin . . . . .	800 M.	—	—	—	—	—	—	—	800 M.
Brandenburg . . .	800 M.	650 M.	520 M.	450 M.	350 M.	280 M.	200 M.	—	539.33 M.
Pomerania . . . .	800 M.	650 M.	520 M.	450 M.	370 M.	330 M.	230 M.	—	546 M.
Posen . . . . .	—	700 M.	570 M.	460 M.	380 M.	300 M.	—	—	574 M.
Silesia . . . . .	800 M.	720 M.	550 M.	450 M.	420 M.	350 M.	260 M.	200 M.	565.50 M.
Saxony . . . . .	800 M.	650 M.	580 M.	460 M.	380 M.	340 M.	260 M.	200 M.	557 M.
Schleswig-Holstein	800 M.	630 M.	530 M.	450 M.	400 M.	320 M.	—	—	554 M.
Hannover . . . .	800 M.	630 M.	520 M.	450 M.	400 M.	300 M.	220 M.	—	541.33 M.
Westphalia . . . .	800 M.	650 M.	580 M.	500 M.	450 M.	350 M.	250 M.	—	576 M.
Hesse-Nassau . . .	810 M.	680 M.	600 M.	500 M.	450 M.	375 M.	300 M.	220 M.	585.25 M.
Rhine Province	800 M.	650 M.	580 M.	500 M.	450 M.	350 M.	—	—	586 M.

### RENTAL COMPENSATION SCALE FOR WOMEN TEACHERS IN THE *VOLKSSCHULEN*

PROVINCE	CLASSES OF LOCALITIES								PENSION-ABLE PORTION OF RENTAL COMPENSATION
	A	B	C	D	E <sub>1</sub>	E <sub>2</sub>	E <sub>3</sub>	E <sub>4</sub>	
East Prussia . . .	600 M.	500 M.	400 M.	330 M.	250 M.	220 M.	180 M.	—	410 M.
West Prussia . . .	560 M.	470 M.	390 M.	330 M.	260 M.	220 M.	180 M.	—	394 M.
Berlin . . . . .	560 M.	—	—	—	—	—	—	—	560 M.
Brandenburg . . .	560 M.	470 M.	390 M.	330 M.	250 M.	200 M.	150 M.	—	390 M.
Pomerania . . . .	560 M.	470 M.	390 M.	330 M.	290 M.	250 M.	180 M.	—	398 M.
Posen . . . . .	—	480 M.	400 M.	330 M.	280 M.	220 M.	—	—	404 M.
Silesia . . . . .	560 M.	500 M.	410 M.	330 M.	300 M.	250 M.	190 M.	140 M.	404 M.
Saxony . . . . .	560 M.	470 M.	390 M.	330 M.	270 M.	230 M.	190 M.	150 M.	392 M.
Schleswig-Holstein	560 M.	470 M.	390 M.	330 M.	250 M.	180 M.	—	—	393 M.
Hannover . . . .	560 M.	470 M.	390 M.	330 M.	270 M.	220 M.	160 M.	—	393.33 M.
Westphalia . . . .	560 M.	480 M.	400 M.	330 M.	300 M.	250 M.	200 M.	—	408 M.
Hesse-Nassau . . .	560 M.	480 M.	420 M.	360 M.	320 M.	265 M.	210 M.	160 M.	411.75 M.
Rhine Province	560 M.	480 M.	400 M.	350 M.	300 M.	250 M.	—	—	413 M.

## TEACHERS' SALARIES

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## SALARY SCALE IN 27 LARGE CITIES — FOR MEN (WOMEN)

PLACE	POPULATION IN THOUSANDS	AMTSCHULGEGELD FOR DIRECTORS	FINAL LOCAL INCREMENT	LOCAL INCREMENT PAID AS FOLLOWS		HIGHEST SALARY EXCLUSIVE OF RENTAL COMPENSATION
				In 1st Year	In 7 Year	
Aachen . . . . .	156	800 M.	400 M.	150 M.	11 = 200; 14 = 250; 17 = 300; 20 = 350; 26 = 400 M.	3700 M. (2600) M.
Altona . . . . .	173	800 <sup>1</sup> M. (900) M.	570 M.	240 M.	11 = 400; 14 = 450; 23 = 570 M.	3700 M. (2600) M.
Barmen . . . . .	169	800 M.	400 M.	150 M.	11 = 250; 17 = 300; 20 = 350; 26 = 400 M.	4050 M. (2850) M.
Berlin . . . . .	2064	1200 M.	750 M.	300 M.	8 = 350; 9 = 400; 12 = 450; 17 = 500; 20 = 550; 23 = 600; 26 = 650; 29 = 700; 32 = 750 M.	4050 M. (2850) M.
Breslau . . . . .	512	800 M.	600 M.	200 M.	11 = 400; 16 = 500; 21 = 600 M.	3900 M. (2800) M.
Cassel . . . . .	153	950 M.	600 M.	200 M.	8 = 300; 11 = 400; 14 = 450; 17 = 500; 20 = 600 M.	3900 M. (2800) M.
Charlottenburg . . . . .	305	1300 M.	900 M.	300 M.	8 = 400; 11 = 500; 14 = 600; 17 = 700; 20 = 800; 23 = 900 M.	4200 M. (2900) M.
Cologne . . . . .	516	800 M.	700 M.	300 M.	11 = 400; 17 = 500; 23 = 600; 32 = 700 M.	4000 M. (2850) M.
Crefeld . . . . .	129	750 <sup>2</sup> M. (850) M.	400 M.	200 M.	14 = 300; 26 = 350; 29 = 400 M.	3700 M. (2600) M.

SALARY SCALE IN 27 LARGE CITIES — FOR MEN (WOMEN) — *Continued*

PLACE	POPULATION IN THOUSANDS	AMTSCHULZE FOR DIRECTORS	FINAL LOCAL INCREMENT	LOCAL INCREMENT PAID AS FOLLOWS		HIGHEST SALARY EXCLUSIVE OF RENTAL COMPENSATION
				In 1st Year	In ? Year	
Danzig . . . . .	170	750 <sup>3</sup> M. (900) M.	600 M.	—	8 = 100; 11 = 200; 17 = 300; 26 = 400; 32 = 500 M.	3900 M. (2650) M.
Dortmund . . . . .	214	800 <sup>4</sup> M. (400) M.	400 M.	200 M.	8 = 250; 14 = 300; 20 = 350; 23 = 400 M.	3700 M. (2600) M.
Düsseldorf . . . . .	338	850 M.	700 M.	300 M.	11 = 400; 17 = 500; 23 = 600; 32 = 700 M.	4000 M. (2850) M.
Duisburg . . . . .	229	800 M.	450 M.	150 M.	8 = 200; 11 = 250; 14 = 300; 20 = 350; 23 = 400; 32 = 450 M.	3750 M. (2650) M.
Elberfeld . . . . .	170	800 M.	400 M.	150 M.	11 = 250; 17 = 300; 20 = 350; 26 = 400 M.	3700 M. (2600) M.
Essen . . . . .	295	850 M.	600 M.	150 M.	8 = 200; 11 = 250; 14 = 300; 17 = 300; 20 = 450; 23 = 500; 26 = 550; 29 = 600 M.	3900 M. (2650) M.
Frankfurt a.M. . . . .	415	1500 M. <sup>5</sup> (2000) M.	900 M.	300 M.	8 = 400; 11 = 500; 14 = 750; 17 = 800; 20 = 900 M.	4200 M. (2950) M.
Gelsenkirchen . . . . .	170	800 M. <sup>6</sup> (400) M.	400 M.	200 M.	14 = 250; 17 = 300; 20 = 350; 23 = 400 M.	3700 M. (2600) M.
Halle a.S. . . . .	181	1100 M.	450 M.	—	8 = 100; 11 = 200; 14 = 250; 17 = 300; 20 = 400; 23 = 450 M.	3750 M. (2550) M.
Hannover . . . . .	302	1000 M.	600 M.	150 M.	8 = 250; 11 = 350; 17 = 500; 23 = 600 M.	3900 M. (2870) M.

Kiel	211	800 M. (900) M. <sup>7</sup>	570 M.	240 M.	11 = 400; 14 = 450; 23 = 570 M.	3870 M. (2650) M.
Königsberg	246	500 M. <sup>8</sup> (1000) M.	500 M.	—	6 = 100; 8 = 150; 11 = 200; 14 = 300; 17 = 3500; 2 = 400; 23 = 450; 29 = 500 M.	3800 M. (2750) M.
Magdeburg	280	800 M. <sup>9</sup> (1000) M.	550 M.	2200 M.	8 = 250; 11 = 300; 20 = 350; 23 = 400; 26 = 450; 29 = 500; 32 = 550 M.	3850 M. (2600) M.
Posen	157	1000 M.	700 M.	100 M.	8 = 200; 11 = 300; 14 = 400; 20 = 500; 26 = 600; 32 = 700 M.	4000 M. (2850) M.
Neukölln	237	1000 M.	600 M.	100 M.	8 = 150; 11 = 200; 14 = 250; 17 = 300; 20 = 400; 23 = 450; 26 = 500; 29 = 550; 32 = 600 M.	3900 M. (2700) M.
Schöneberg	173	1300 M.	900 M.	400 M.	8 = 500; 11 = 600; 14 = 650; 17 = 700; 20 = 800; 23 = 900 M.	4200 M. (2950) M.
Stettin	236	1000 M.	500 M.	100 M.	11 = 250; 20 = 300; 26 = 400; 32 = 500 M.	3800 M. (2550) M.
Wiesbaden	109	1200 M.	700 M.	300 M.	8 = 350; 11 = 400; 17 = 500; 20 = 600; 23 = 700 M.	4000 M. (2800) M.

<sup>1</sup> 1-6 year 800 M., thereafter 900 M.<sup>4</sup> Less than six classes=400 M.<sup>7</sup> As in Altona.<sup>2</sup> More than fourteen classes=850 M.<sup>5</sup> More than nine classes=2000 M.<sup>8</sup> In schools up to five classes, 500 M.; above five classes, 1000 M.<sup>9</sup> In schools up to twelve classes 800 M., over 12 classes, 1000 M.<sup>3</sup> More than nine classes=900 M.<sup>6</sup> Less than six classes=400 M.

In order that the salaries given above may be compared with those paid in other parts of Germany, some cities and states outside of Prussia are quoted:

Brunswick (city) . . .	1800-3900 M. <sup>1</sup>	Bremen . . . . .	2200-4800 M. <sup>1</sup>
Bremerhaven . . . .	2300-4600 M.	Chemnitz . . . . .	1500-3800 M.
Hamburg . . . . .	2600-5100 M. <sup>1</sup>	Karlsruhe . . . . .	2400-4200 M. <sup>1</sup>
Leipzig . . . . .	1600-3800 M.	Munich . . . . .	2820-5520 M. <sup>1</sup>
Nürnberg . . . . .	2640-5220 M.	Plauen . . . . .	1600-3500 M.
Strassburg . . . . .	1600-4220 M.	Stuttgart . . . . .	1650-3250 M.
Anhalt . . . . .	1260-3150 M.	Baden . . . . .	1600-3200 M.
Bavaria . . . . .	1200-2800 M.	Brunswick . . . . .	1410-3300 M.
Bremen . . . . .	2200-4800 M.	Alsace-Lorraine . .	1200-2400 M.
Lippe-Detmold . . .	1400-2400 M.	Hesse . . . . .	1200-3000 M.
Lübeck . . . . .	2100-4400 M.	Schaumburg-Lippe .	1400-3200 M.
Meck.-Strelitz . . .	1200-2300 M.	Meck.-Schwerin . .	1100-1800 M.
Saxony . . . . .	1500-3000 M.	Oldenburg . . . . .	1200-2730 M.
Saxe-Coburg . . . .	1200-2900 M.	Sax.-Altenburg . . .	1300-2600 M.
Saxe-Meinigen . . .	1250-3000 M.	Saxe-Gotha . . . . .	1200-2900 M.
Reuss L. . . . .	1300-2800 M.	Reuss ä. L. . . . .	1300-2800 M.
Schw.-Sonderhausen .	1190-2430 M.	Schw. Rudolstadt . .	1200-2400 M.
Waldeck . . . . .	1400-3020 M.	Weimar . . . . .	1200-2750 M.
		Württemberg . . . .	1600-3200 M.

The following salaries, which include all items, are the highest which are paid in Prussia. 4.20 M. are equivalent to \$1.00.

Posen . . . . .	5030 M.
Frankfurt-am-Main . . . . .	5010 M.
Charlottenburg . . . . .	5000 M.
Dahlem . . . . .	5000 M.
Grunewald . . . . .	5000 M.
Schöneberg . . . . .	5000 M.
Steglitz . . . . .	5000 M.
Wilmsdorf . . . . .	5000 M.
Berlin . . . . .	5000 M.
Borkum . . . . .	4950 M.
Friedenau . . . . .	4850 M.
Gr. Lichterfelde . . . . .	4850 M.

<sup>1</sup> Including Rental Compensation.

## TEACHERS' SALARIES

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Tempelhof . . . . .	4850 M.
Zehlendorf . . . . .	4850 M.
Wiesbaden . . . . .	4810 M.
Treptow . . . . .	4800 M.
Düsseldorf . . . . .	4800 M.
Cologne . . . . .	4800 M.
Hermsdorf . . . . .	4700 M.
Lankwitz . . . . .	4700 M.
Lichtenberg . . . . .	4700 M.
Mariendorf . . . . .	4700 M.
Pankow . . . . .	4700 M.
Potsdam . . . . .	4700 M.
Neukölln . . . . .	4700 M.
Stralau . . . . .	4700 M.
Tegel . . . . .	4700 M.
Wannsee . . . . .	4700 M.
Weissensee . . . . .	4700 M.
Friedrichfelde . . . . .	4650 M.
Breslau . . . . .	4620 M.
Alderhof . . . . .	4570 M.
Marienfelde . . . . .	4570 M.
Nowawes . . . . .	4570 M.
Britz . . . . .	4550 M.
Nieder-und Ober Schöneeweide . . . . .	4550 M.
Niederschönhausen . . . . .	4550 M.
Reinickendorf . . . . .	4550 M.
Spandau . . . . .	4550 M.
Helgoland . . . . .	4550 M.
Königsberg in Pr. . . . .	4550 M.
Glowno . . . . .	4540 M.
Heinersdorf . . . . .	4520 M.
Köpenick . . . . .	4520 M.
Alt-Gliencke . . . . .	4500 M.
Grünau . . . . .	4500 M.
Lichtenrade . . . . .	4500 M.
Wiltenau . . . . .	4500 M.
Hanau . . . . .	4500 M.
Kassel . . . . .	4500 M.
Lissa . . . . .	4500 M.

Altona . . . . .	4500 M.
Kiel . . . . .	4500 M.
Wilhelmshaven . . . . .	4480 M.
Stettin . . . . .	4450 M.

Everybody in Prussia whose income is more than 900 M. a year must pay an income tax, so this must be deducted from the total amount of the salary if we want to get at the true income of the teacher.

## THE INCOME TAX SCHEDULE

INCOME FROM MORE THAN	AND UP TO AND INCLUDING	TAX
900 M.	1050 M.	6 M.
1050 M.	1200 M.	9 M.
1200 M.	1350 M.	12 M.
1350 M.	1500 M.	16 M.
1500 M.	1650 M.	21 M.
1650 M.	1800 M.	26 M.
1800 M.	2100 M.	31 M.
2100 M.	2400 M.	36 M.
2400 M.	2700 M.	44 M.
2700 M.	3000 M.	52 M.
3000 M.	3300 M.	60 M.
3300 M.	3600 M.	70 M.
3600 M.	3900 M.	80 M.
3900 M.	4200 M.	92 M.
4200 M.	4500 M.	104 M.
4500 M.	5000 M.	118 M.
5000 M.	5500 M.	132 M.
5500 M.	6000 M.	146 M.
6000 M.	6500 M.	160 M.
6500 M.	7000 M.	176 M.
7000 M.	7500 M.	192 M.
7500 M.	8000 M.	212 M.
8000 M.	8500 M.	232 M.
8500 M.	9000 M.	252 M.
9000 M.	9500 M.	276 M.
9500 M.	10500 M.	300 M.



## CHAPTER XI

### TEACHERS' PENSIONS

TEACHERS receive pensions in all German states, although the systems of pensioning are by no means uniform. The differences concern the amount of the pension, the age at which it is granted, and the manner in which the pension fund is raised.

In Prussia the matter is regulated by the pension law of July 6, 1885, which was revised in 1907. Every teacher who has served ten years in the schools is entitled to a pension, if he or she be compelled to retire after that period, or in case the inability to serve has been brought about by the performance of duties in the school. At the age of sixty-five teachers may retire with a pension, even though they may still be able to perform the duties of their office. If teachers retire at any time between the tenth year of service and the sixty-fifth year of life, a doctor's certificate is necessary to prove that they are no longer able to teach.

The amount of the pension is regulated according to Article 2 of the law of 1907.<sup>1</sup> It reads as follows :

The pension, if retirement occurs after the tenth completed year of service but yet before the eleventh full year, amounts to  $\frac{2}{10}$  of the last income of the teacher, and increases thereafter by  $\frac{1}{10}$  of this income for every year of service following up to the thirtieth completed year of service, and increases after that each year by  $\frac{1}{15}$  of the income last paid. The pension cannot be more than  $\frac{4}{5}$  of the last salary.

The income last received by the teacher is made the basis for computation of the pension. In this income are included cash

<sup>1</sup> *Zentralblatt*, 1907, p. 570.

payments to the teacher (basal salary, local increment, or bonus, rental compensation, service increments), free lands, dwelling, or fuel (see p. 199). The years of service are counted from the time at which the teacher entered the public school service in Prussia. The first six hundred marks of the pension is paid out of the state treasury, while the remainder is paid by the local communities or others responsible for the support of the schools.

In Alsace-Lorraine, the same pension system is in force as in Prussia. The formula expressing the calculation of the pension in Prussia and in Alsace-Lorraine is  $[\frac{20}{100} \text{ plus } \frac{1}{100} (\text{number of years between the 10th and the 31st}) \text{ plus } \frac{1}{120} (\text{number of years between the 30th and the 41st})] \times (\text{salary at retirement})$ . The pension according to this formula would lie between one third and three fourths of the salary at retirement. In 1909 there were 10,725 teachers on the pension list, and pensions amounted to 18,164,900 marks annually.

In Prussia the pension is paid partly by the state and partly by the community, while the teachers contribute nothing at all.

This is not true of all the states. In Oldenburg, Reuss ä. L., and in Reuss j. L., the teachers contribute, while in Mecklenburg-Strelitz there is no pension fund. The other states have non-contributory funds.

The maximum pension is reached in Prussia at sixty-five, likewise in Württemberg and Saxony, which in general means after forty-five years of service. This is also the case in Schaumburg-Lippe. In Hesse, Mecklenburg-Schwerin, Saxe-Meiningen, Anhalt, Brunswick, and Schwarzburg-Rudolstadt, the highest pension is paid after fifty years of service, while in Baden, Saxe-Coburg, Saxe-Altenburg, Schwarzburg-Sondershausen, and Hamburg, the maximum pension comes after forty years in the schools. Bremen pays its maximum after thirty years of service, and Oldenburg, Saxe-Weimar, and Lippe after thirty-seven years.

Contribu-  
tory Pen-  
sion Funds

Maximum  
Pension

In Bavaria there is a pension fund in each administrative district, to which teachers, local communities, and the state contribute. The amount of the pension varies greatly in the several districts. Pensions in Bavaria are rather Bavaria high as a rule, and begin with the first year of service. For instance, in Munich the pension within the first ten years of service is 70 per cent of the salary; 80 per cent for retirement within the eleventh and twentieth years of service; 90 per cent between the twenty-first and thirtieth years; and 100 per cent if the pensioning takes place after the fortieth year in the schools. In Bavaria length of service is reckoned from the twenty-fifth year of age. The men teachers have to contribute 6 per cent and the women 2.5 per cent of the first year's salary upon registering for a pension and a like percentage on all subsequent increases. This amount is paid only once. Thereafter each year the men must pay 3 per cent and the women 1.2 per cent of the yearly salary, if they enter before the thirty-fifth year. If they register thereafter, they must pay 4 per cent and 2.2 per cent, men and women respectively.

In Saxony the pension amounts to 30 per cent of the yearly salary, if retirement occurs between the eleventh and sixteenth years of service; then it increases 1 per cent yearly up to the completed seventeenth year; 2 per cent yearly from then to the completed twenty-fifth year; to the completed thirty-second year 3 per cent yearly; from there on 2 per cent each year to the thirty-fifth year; and finally a yearly 1 per cent increase from then till the completed fortieth year of service, which in all amounts to 80 per cent of the highest salary after forty years in the school.

The smaller states in Germany have pension laws very similar to those of Prussia.

Pensions are also provided for the widows and orphans of teachers in almost all German states, but there are many dif-

ferences among the different states. In some states both the widows and orphans receive pensions, in others only the widows receive pensions. Another difference lies in the manner in which the pension is reckoned. Sometimes it is reckoned on the basis of the teacher's pension and sometimes on the basis of the salary last drawn. The pension in other states is often a definite amount regardless of the salary of the husband.

The widows and orphans of Prussian elementary school teachers were first provided for on a large scale by the law of December 22, 1869, which arranged for the establishment, or rather the reorganization, of widows' and orphans' funds. According to this law the pension of the widow of a school-teacher was one hundred and fifty marks annually. This pension was increased under the widows' pension fund law of 1881 to two hundred and fifty marks a year. Again in 1889 the position of teachers and their families was somewhat improved, in that, according to law of June 19th of that year, the yearly premiums, as well as the initial fee for entrance into the pension foundation, were abolished. That was the end of contributory pension funds in Prussia. At the present teachers and their widows and children are treated just as other state officials. The law which regulates widows' and orphans' pensions bears the date of December 4, 1899, with a slight revision in 1907. The important articles of the law as revised in 1907 read as follows:

Section 3. The widow's pension amounts to forty per cent of the pension which her husband drew, or to which he would have been entitled, if he had been retired on the day of his death. The widow's pension shall amount at least to three hundred marks yearly, but shall not exceed thirty-five hundred marks, with the reservation of section 5 kept in mind.

Section 4. The orphan's pension amounts to one fifth of the widow's pension for each child for children whose mother is living and was entitled

to a pension at the time of the teacher's death, and to one third of the widow's pension for children whose mother was dead or was not entitled to a widow's pension at the time of the teacher's death.

Section 5. Widow's and orphan's pensions singly or together must not amount to more than the sum of the pension to which the deceased was entitled, or would have been entitled had he been retired on the day of his death. The amount of the widow's and orphan's pension may be curtailed by application of this limitation.

The right to draw pension expires when any such person marries or dies, and the orphans cease to draw pensions at the close of their eighteenth year. The state pays the first four hundred and twenty marks of widows' pensions, the first eighty-four marks of half-orphans' pensions, and the first one hundred and forty marks of full orphans' pensions. The remainder of the pension is paid by the local community or parties responsible for the support of the schools.

In Bavaria there are special funds in each district or community for the support of widows and orphans. These funds are more or less like beneficiary insurance societies to which the teachers must pay certain sums or premiums. Bavaria

Orphan funds are generally of a private character except in large cities. These are supported by the teaching body. The *Lehrer-waisenstift* (teacher's orphan foundation) is one of the most important of these societies. One may take Munich for an example of the working of the widow and orphan pension system in Bavaria.<sup>1</sup>

A. The yearly pension of the widow is reckoned on the basis of the pensionable salary last drawn by her husband while in active service and on the following scale:

1. 10 per cent for the widows of substitutes or temporarily employed teachers.
2. For the widow of an elementary school teacher,
  - a. 12 per cent in case of his death after the second full year of service;

<sup>1</sup> Lexis, vol. III, p. 184.

- b. 15 per cent in case of his death after the second and before the seventh year of service;
- c. 19 per cent in case of his death after the seventh and before the seventeenth full year of service;
- d. 25 per cent in case of his death after the seventeenth completed year of service.

B. The yearly pension of legitimate children is fixed for each child at

- (a)  $\frac{2}{10}$  of the mother's pension, if the children are half orphans; and
- (b)  $\frac{3}{10}$  of the mother's pension, if they are full orphans.

In the kingdom of Saxony the widow's pension amounts to one fifth of the salary last drawn by the husband, while each orphan receives one fifth of the amount of the mother's pension, if the mother is living and as long as she lives, and after her death three tenths of the widow's pension.

The amount of the widow's pension in the Grand Duchy of Hesse is based on the number of years of the husband's service in the schools. From the first to the tenth full year the widow receives yearly 450 marks, from the eleventh to the twentieth completed year inclusive 500 marks, from the twenty-first to the thirtieth year inclusive 550 marks, and 600 marks if he had served longer than thirty years. The orphan's pension amounts to one fifth of the widow's pension, if the mother is living; but if the mother is dead, the orphan's pension is two thirds of the mother's pension in case there is only one child, one half of the mother's pension in case there are two children; and in case there are three or more children, each one receives a third of the widow's pension; but in no case may the total amount of pensions for the heirs of one teacher come to more than 1200 marks.

The regulations in the other states in regard to this matter show many minor differences, but in general the instances given above are typical.

It is the policy of the German governments to pension state officials. This is particularly true in Prussia. As every one knows there is a very large officialdom in Germany, Principle of Pensioning and all officials are salaried and pensioned, thereby removing them from the influence and whims, and we may say, also the rightful desires of the people whom they serve. This large body of officials rides safely and supreme upon the shoulders of the governed. It must be said that they do their work faithfully and well, even though at times they conduct themselves as if they were rulers and not servants of the people. Civility is not the most prominent characteristic of the German official, and this attitude arises from the knowledge of the security of his position. He knows his salary and pension are secure, so long as he fulfills the word of the regulations which are laid down for him. These statements are not true of the German elementary teacher or of his administrator. Although the teacher is a state official, he cannot be put in the category of the "typical German official," and it is no doubt due to his training that he is so different from other classes of officials in his attitude towards the people he serves and toward strangers.

A still more striking effect of the system of pensioning for teachers, widows, and orphans is the sense of security brought by the knowledge that the rainy day is provided for. This knowledge keeps teachers in the profession and enables them to devote themselves entirely to their work without being required to worry about the time when disability forces them from the schools.

## CHAPTER XII

### ORGANIZATION OF THE *VOLKSSCHULEN* AND COURSES OF STUDY

A. Although the *Volksschule* is not organized in the same way in all the states of the empire, an exact statement of the organization in Prussia will suffice to give a reasonably clear conception of elementary school organization in Germany.

The *Volksschulen* of Prussia are organized according to the general Regulations of October 15, 1872. The normal forms of the elementary school under these regulations are the several-class school, the school with two teachers, and the school with one teacher, which is either a one-class school or a half-day school. The seven- and eight-grade schools of the present time are not specifically recognized by these regulations at all.

The one-class school corresponds to our ungraded country school, in that all children of compulsory school age are put into one class and are taught by a single teacher. The number of pupils in such a class must not exceed eighty. The school is divided into three sections or groups,<sup>1</sup> as are all *Volksschulen*. As a rule the children of the lower section receive twenty hours of instruction a week, while those of the middle and upper sections receive thirty hours, including physical training for boys and handwork for girls.

<sup>1</sup> The lower section usually comprises those children who have been in school from one to three years; the middle section those children in school four or five years; and the upper section those who have been in school six, seven, or eight years.



A one-class school may be organized into a half-day school with the approval of the administrative county government, whenever the number of children exceeds eighty, or **Half-Day School** where the schoolroom is overcrowded, or where conditions do not allow a second teacher to be employed. Both divisions of the half-day school together receive thirty-two hours of instruction each week.

If two teachers are employed in one school, the instruction is given in two separate classes. When the number of children in such a school exceeds one hundred and twenty, a three-class school is organized, although the number of teachers may not necessarily be increased. In a **School with Two Teachers** three-class school with two teachers, there are twelve hours of instruction each week for the first class, twenty-four hours for the second, and twenty-eight for the third.

In schools with three or more classes <sup>1</sup> (not used in the sense of grade), except schools with three classes and two teachers, the children of the lower section receive twenty-two hours of instruction a week, those of the middle section **Several-Grade School** twenty-eight, and those of the upper section thirty-two. A school with more than six grades was scarcely thought of in 1872, but since that time the seven- and eight-grade systems have become very common in the larger cities.

Concerning the number of schools of the various types, the following tables <sup>2</sup> on page 223 show the forms of elementary school organization most in favor. A very small number of **Types of Schools** children, comparatively speaking, are educated in school systems of eight grades, which fact seems rather strange, inasmuch as the period of compulsory education covers eight years. The number of eight-grade school systems, however, is increasing. Naturally, a great waste of time and unnecessary

<sup>1</sup> A class frequently includes more than one year's work.

<sup>2</sup> *Statistisches Jahrbuch für den preussischen Staat*, 1913.

repetition are entailed in the upper classes of the six- and seven-grade systems by the fact that the pupils must either repeat the work of the last year in their school during the eighth year, or, as is generally done, follow a two years' course in the seventh grade. In one way or another, the grades are so combined or organized with reference to the subject matter that the eight years are filled out. As will be shown in another place, by no means all of the pupils cover eight years' work, although they remain in school during the whole compulsory period. A six- or seven-grade system is very convenient for retarded children, in that such children, if retarded only one or two years, are enabled thus to get a rounded-out training.

The elementary schools of Prussia are organized on several bases; namely, the number of grades into which the work is divided, and the sex, religion, and number of the pupils.

There were in Prussia in the years 1901, 1911, the following numbers of school communities:

#### SCHOOL COMMUNITIES IN PRUSSIA

	1901	1906	1911
School communities with one school . . . . .	25,395	25,481	26,339
School communities with two schools . . . . .	1,970	2,078	1,927
School communities with three or more schools . .	663	726	705
Total school communities . . . . .	28,028	28,285	28,971

The decrease in the number of communities with two schools is due to the fact that recently attempts have been made to unite one-class schools where they hitherto existed side by side.

The figures which follow, as stated before, show the different forms of school organization which existed in Prussia with reference to the number of successive classes (grades).

## TYPES OF SCHOOLS IN PRUSSIA

TYPES OF SCHOOLS	1886	1891	1896	1901	1906	1911
One-class schools . . .	17,743	16,545	15,578	13,530	13,507	13,543
Half-day schools . . .	5,481	5,925	6,856	7,873	7,369	6,655
Two-class schools with two teachers . . . . .	3,032	3,210	3,215	3,573	3,941	4,104
Three-class schools . . .	2,610	3,136	3,547	3,830	3,958	4,192
Other three-class schools and several-class schools	5,150	5,926	6,942	7,950	8,986	10,190
Total schools . . .	34,016	34,742	36,138	36,756	37,761	38,684

## TYPES OF URBAN SCHOOLS IN PRUSSIA

TYPES OF SCHOOLS	1886	1891	1896	1901	1906	1911
One-class schools . . . . .	556	461	468	408	417	394
Half-day schools . . . . .	91	78	75	79	64	59
Two-class schools with two teachers	210	234	199	214	227	223
Three-class schools with two teachers	151	111	141	101	114	95
Other three-class schools and several-class schools . . . . .	2,700	2,987	3,359	3,612	4,010	4,354
Total schools . . . . .	3,718	3,871	4,242	4,414	4,832	5,125

## TYPES OF RURAL SCHOOLS IN PRUSSIA

TYPES OF SCHOOLS	1886	1891	1896	1901	1906	1911
One-class schools . . .	17,177	16,084	15,110	13,122	13,090	13,149
Half-day schools . . .	5,390	5,847	6,781	7,794	7,305	6,596
Two-class schools with two teachers . . . . .	2,822	2,976	3,016	3,359	3,714	3,881
Three-class schools with two teachers . . . . .	2,459	3,025	3,406	3,729	3,844	4,097
Other three-class schools with other several-class schools . . . . .	2,450	2,939	3,583	4,338	4,976	5,836
Total schools . . .	30,298	30,271	31,896	32,342	32,929	33,559

The two preceding tables give the distribution according to classes for urban and rural schools in Prussia for *quinquennial* periods from 1886 to 1911.

The next table gives the number of schools organized variously as to the number of classes, and also the actual total number of separate classes. In these schools the course of study is divided up according to the number of grades in the school.

DISTRIBUTION OF SCHOOLS ACCORDING TO GRADES;  
AND ACTUAL NUMBER OF CLASSES  
IN THESE SCHOOLS

TYPES OF SCHOOLS	1886	1891	1896	1901	1906	1911
Schools of one class . .	17,744	16,600	15,892	13,615	13,536	13,571
with classes . . .	17,745	16,655	16,206	13,700	13,565	13,596
Schools of two classes . .	8,845	9,474	10,181	11,849	11,680	11,134
with classes . . .	18,141	19,425	20,868	24,313	23,826	22,706
Schools of three classes .	3,949	4,447	4,930	5,258	5,562	5,904
with classes . . .	12,561	14,054	15,527	16,593	17,400	18,266
Schools of four classes .	1,352	1,553	1,709	1,834	1,822	1,929
with classes . . .	6,408	7,247	7,755	8,274	8,029	8,280
Schools of five classes .	649	692	863	968	1,061	1,176
with classes . . .	4,102	4,253	5,116	5,623	6,091	6,744
Schools of six classes . .	1,187	1,551	1,830	1,613	1,568	1,484
with classes . . .	12,825	16,181	18,699	15,317	13,997	12,638
Schools of seven classes .	290	425	733	1,336	1,988	2,809
with classes . . .	3,315	4,931	7,830	15,940	24,292	35,560
Schools of eight classes .				283	544	677
with classes . . .				4,322	8,702	10,431
Advanced . . . .						504

The type of school most favored in the cities is the seven-grade or seven-class school, while the one generally found in the country has three classes or less. The following tables illustrate this point clearly:

## TYPES OF SCHOOLS AND NUMBER OF CLASSES IN CITIES

TYPES OF SCHOOLS	1886	1891	1896	1901	1906	1911
Schools of one class . . .	567	464	479	410	420	396
with classes . . .	568	467	491	412	423	398
Schools of two classes . . .	342	329	291	305	309	292
with classes . . .	740	685	622	628	644	595
Schools of three classes . . .	548	467	493	404	378	334
with classes . . .	1,954	1,653	1,712	1,435	1,282	1,082
Schools of four classes . . .	566	538	519	432	370	312
with classes . . .	2,926	2,775	2,535	2,187	1,799	1,428
Schools of five classes . . .	405	386	380	362	314	275
with classes . . .	2,678	2,542	2,413	2,240	1,940	1,700
Schools of six classes . . .	1,028	1,207	1,440	1,118	1,002	827
with classes . . .	11,420	13,923	15,383	11,174	9,577	7,652
Schools of seven classes . . .	262	390	640	1,118	1,525	2,050
with classes . . .	3,062	4,604	6,998	13,572	18,926	26,737
Schools of eight classes . . .				265	514	639
with classes . . .				4,076	8,250	9,835
Advanced classes . . .						444

## TYPES OF SCHOOL AND NUMBER OF CLASSES IN THE COUNTRY

TYPES OF SCHOOLS						
One-class schools . . .	17,177	16,136	15,413	13,205	13,116	13,175
with classes . . .	17,177	16,188	15,716	13,288	13,142	13,198
Two-class schools . . .	8,503	9,145	9,890	11,544	11,371	10,842
with classes . . .	17,401	18,740	20,246	23,685	23,182	22,111
Three-class schools . . .	3,401	3,980	4,437	4,854	5,184	5,570
with classes . . .	10,607	12,401	13,815	15,158	16,118	17,184
Four-class schools . . .	786	1,015	1,190	1,402	1,452	1,617
with classes . . .	3,482	4,472	5,220	6,087	6,230	6,852
Five-class schools . . .	244	206	483	606	747	901
with classes . . .	1,424	1,711	2,703	3,374	4,151	5,044
Six-class schools . . .	159	254	390	495	566	657
with classes . . .	1,405	2,258	3,316	4,142	4,420	4,986
Seven-class schools . . .	28	35	93	218	463	759
with classes . . .	253	325	832	2,368	5,366	8,823
Eight-class schools . . .				18	30	38
with classes . . .				246	452	596
Advanced classes . . .						60

Schools in Prussia with one, two, three, etc., teachers are as follows: There is not, especially in the country, a teacher for every class, very frequently there being one less teacher in a school than there are classes; for example, a three-class school with two teachers.

## SCHOOLS CLASSIFIED ACCORDING TO NUMBER OF TEACHERS

Types of Schools (a) CITY; (b) COUNTRY.	(a) 1901	1906	1911	(b) 1901	1906	1911
Schools with one teacher . .	487	481	453	20,917	20,395	19,745
Schools with two teachers . .	317	342	319	7,380	7,862	8,224
Schools with three teachers .	287	256	252	1,590	2,167	2,474
Schools with four teachers . .	325	320	270	880	928	1,054
Schools with five teachers . .	270	244	218	366	457	532
Schools with six teachers . .	391	349	304	275	307	379
Schools with seven teachers .	481	505	506	130	190	273
Schools with eight or more teachers . . . . .	1,850	2,335	2,803	444	623	878

## CHILDREN IN THE VARIOUS TYPES OF SCHOOLS IN 1911

Types of Schools	CITY	COUNTRY	TOTAL	PER CENT
Children in one-class schools . .	13,706	647,308	661,014	10.00
Children in half-day schools . .	4,316	522,850	527,166	8.02
Children in two-class schools with two teachers . . . . .	20,519	417,879	438,398	6.67
Children in three-class schools with two teachers . . . . .	11,681	566,727	578,408	8.80
Children in other three-class schools and several-class schools	2,496,531	1,870,623	4,367,154	66.44
Total number of children .	2,546,753	4,025,387	6,572,140	100.00

The division of children among schools varying in number of classes is better shown by the following table, taken from the *Statistisches Jahrbuch für den preussischen Staat* for 1912.

## DISTRIBUTION OF CHILDREN IN VARIOUS TYPES OF SCHOOLS

TYPES OF SCHOOLS	CITY	COUNTRY	TOTAL	PER CENT
Children in one-class schools . .	13,942	650,536	664,478	10.11
Children in two-class schools . .	26,577	1,003,470	1,030,047	15.82
Children in three-class schools . .	50,297	860,786	911,083	13.86
Children in four-class schools . .	74,769	383,626	458,395	6.97
Children in five-class schools . .	80,967	290,473	371,440	5.65
Children in six-class schools . .	402,250	294,174	696,424	10.59
Children in seven-class schools . .	1,422,634	506,467	1,929,101	29.35
Children in eight-class schools . .	464,029	34,505	498,534	7.58
Children in advanced classes . .	11,288	1,350	12,638	0.19
Total number of children . .	2,546,753	4,025,387	6,572,140	100.00

From the table immediately preceding it is seen that only a little more than  $7\frac{1}{2}$  per cent of the children in the Prussian *Volksschulen* are in schools of eight classes; about twenty-six (26) per cent attend one- or two-class schools, a little more than twenty (20) per cent attend schools of three or four classes, while over sixteen (16) per cent attend schools of five or six classes, and about thirty (30) per cent attend the seven-class school. The last-mentioned type of school seems to stand in greatest favor at the present time. The period of compulsory attendance is eight years, though many of the children do not attend longer than seven and a half years, and making allowances for non-promotions, seven one-year courses are often all the pupils ever complete. In such schools an advanced class is formed for those pupils who complete the work of seven years on schedule time, and who must remain in school. The ideal, however, is to have eight-class schools, one year being given to each class and the entire subject-matter being divided into eight one-year courses. The larger cities are gradually approaching this goal, but are held back chiefly by lack of money. The six-class systems are rapidly losing ground, giving way to systems of seven or eight classes.

The number of classes which a school has is determined by the number of pupils and by the number of teachers available.

**Half-day Schools** It is merely a question of how many children at the most can be taught together by a single teacher. In Prussia the law requires that when the number of children exceeds eighty, a second teacher shall be appointed. A very important matter to be decided is the form of school organization best for those schools in which there is only one teacher, since about one fifth of all the children in Prussian elementary schools are in institutions of this kind. In Baden and in Saxony schools with one teacher are always divided into two classes, but in Prussia it is different. According to the General Regulations of October 15, 1872, twenty hours of instruction must be given in the lower section of the one-class school, and thirty hours in each of the other two sections. Under certain conditions, however, a half-day school may be organized. A half-day school is one in which the lower section is entirely divided from the two upper sections, receiving twelve hours' instruction per week, and the upper and middle sections combined in all recitations, receiving a total of twenty hours of instruction. This type of school amounts to a two-class school, for, in addition to being wholly separated in all subjects of instruction, each group attends school at different hours. It is the general opinion of German school men that the half-day school is not so good a form of organization as the undivided one-class school.

Reference to the chapter on school statistics (p. 91) will furnish an insight into the length of school attendance, the cost, and results of instruction under the different systems. E. Schwartz in an article in *Schulstatistische Blätter*, July 18, 1912, has adduced rather conclusive proof showing the superiority of the eight-class system over systems having fewer classes.<sup>1</sup> He measures

<sup>1</sup> Schwartz, *Schulstatistische Blätter*, July 1913. See also E. Schwartz: *Organization und Unterrichtserfolge der städtischen Volksschulen in Deutschland, eine kritische Darstellung auf Grund der Normalschule als Massenheit*. Berlin, 1907.



the success of instruction by the percentage of children dismissed from school attendance out of the highest class. The eight-class systems carry by far the largest percentage of their children through the entire course. The average number of pupils per class is less in the eight-class systems than in the seven-class, but about the same as in the six-class systems. It is also frequently maintained that an eight-class system costs more than the others, while the tables in the authority quoted prove rather conclusively that the cost per child in the former is less generally than in the latter.

It is a principle of elementary school organization in Germany that Protestant children shall attend Protestant schools and that Catholic children shall attend Catholic schools. Furthermore, the teachers are divided along the same lines. Since the time of the Reformation, the principle has existed that the inhabitants of a principality follow the religion of their ruler. Consequently, the population in most localities of Germany, at the time *Volksschulen* were first established, was generally unmixed. It was only natural that the school have the same faith as the inhabitants, and that the teacher also belong to the same confession. So, even where the church has nothing to do with the establishment of the school, the latter has always been organized on a confessional basis. In some parts of Germany, for instance, in Nassau, the population was so mixed religiously that a non-confessional school (*Simultanschulen*) was organized, which, according to the law, is a school in which teachers of different confessions are employed. By *Simultanschulen* is meant, in the ordinary sense of the word, a school where children of different religions are taught together. The Prussian school, however, has developed on the confessional basis. According to Article 24 of the Prussian Constitution, "In the establishment of public *Volksschulen* the confessional conditions are to be taken into consideration as far as possible."

Confes-  
sional  
Schools

The school law of 1906 regulated the confessional affairs of the elementary school anew, recognizing both the confessional and the non-confessional school. Special religious instruction is provided for the religious denomination in the minority, and under certain conditions schools may even be erected for them. In all large cities there are Catholic and Protestant schools. The normal training schools are also divided on the same basis. In the cities it is reasonably easy to establish denominational schools, but in the country more and more difficulty will arise as the population becomes more and more mixed in religious matters.

The next principle of school organization is that of separate schools for boys and girls. About two thirds of the children in Prussia are found in mixed classes. In school districts where there are enough children to form two full schools with the complete number of classes, the sexes are segregated for pedagogical, ethical, and economical reasons. The separation of the sexes has a direct effect upon the organization and efficiency of the *Volksschulen*, particularly in small communities. If the number of children in such a community is divided into halves and put into separate schools, the schools frequently cannot have as many classes as if the boys and girls were taught together. If the principle is correct that the efficiency of a school increases with the number of classes, a division of the sexes would lead often to a lessening of the school's efficiency. Moreover, separate classes for boys and girls in small communities often increase the cost of education, because the number of classes necessary will be greater in a divided system, and the smaller the community, the greater the increase in absolute cost per pupil. The Catholic communities generally insist on separate classes, just as the Catholics also demand that the larger girls be taught by women teachers. The General Regulations of October 15, 1872, recommended that in schools with

Boys' and  
Girls'  
Schools

three or more classes a division of the sexes is desirable. This recommendation has found little acceptance, however, for the Prussian *Volksschule* has developed from an economic point of view in this respect rather than from any so-called ethical or pedagogical principles. The percentage of sex division has increased latterly, not so much from a belief that there is any special advantage in divided schools, but rather on account of the growth of large cities in recent years, where the organization of separate schools entails no extra expense.

In addition to the principles of organization discussed above, the organization of the school or class according to the number of pupils is also significant. In cities, as soon as a class becomes too large, a parallel class is formed, and gradually the whole school is really a double institution. When all the classes are parallel, if finances allow, a new school is formed under another principal. This, however, is not the rule, the double school remaining under the same principal until further growth takes place which compels a division. The number allowed in a class varies greatly in Germany.

NUMBER OF VILLAGES AND SCHOOLS	RANGE IN NUMBER OF PUPILS
21	11-30
32	31-40
48	41-50
81	51-60
84	61-70
53	71-80
53	81-90
16	90-100
I	III

In Prussia seventy are allowed in a several-class school and eighty in a one-class school. The average is by no means so high, being only forty-nine in the cities and fifty-six in the whole kingdom. In Baden and Hesse, the number of pupils permissible

is seventy, in Württemberg sixty. In country schools other conditions prevail sometimes. For example, in the Duchy of Brunswick the number of children per teacher for rural schools is as shown in the accompanying table. This condition is not uncommon in country districts, and there are cases in which one teacher has even more than 111 children to teach.<sup>1</sup>

The number of classes per school, or rather the number of classes under the supervision of one principal, varies greatly in Prussia, and still more in the other German states. From a questionnaire sent out in 1912-13,<sup>2</sup> it was found that in 4463 schools in Prussia, 1961 of them had from 6 to 10 classes; 1537, from 11 to 15 classes; 697, from 16 to 20 classes; 194, from 21 to 25 classes; 62, from 26 to 30 classes; and 12 had between 30 and 35 classes. In Prussia there is an evident attempt to hold the number of classes under one principal to fifteen or less. In Munich there are schools with 34 classes. In Saxony the principal (*Schuldirektor*) often has several schools under his supervision, although this is true only of smaller cities. The highest number of classes under one principal is 38 in Zwickau, 40 in Mittweida, 41 in Lobau, 44 in Chemnitz, and 69 in Falkenstein.

In large city systems there is usually one teacher for every class in schools having six or more classes. One-class schools have one teacher. Half-day schools, which really amount to two-class schools, have also one teacher. The number of teachers, however, when the children become too numerous for one teacher, does not always correspond to the number of classes. Prussia has no law covering this point. Sometimes on the appointment of a second teacher, the school is organized as a two-class and sometimes as a three-

<sup>1</sup> *Das Schulwesen in Herzogtum Braunschweig, 1912-1913, Schulstatistische Blätter*, July 24, 1913, p. 73.

<sup>2</sup> *Schulstatistische Blätter*, March, 1913, p. 27.

class school. The three-class school with two teachers has advantages over a two-class school with two teachers, in that the former has fewer children per class, and each class has fewer hours per week. Even in four- and five-class schools it is very common that the number of teachers is *one* less than the number of classes, as a reference to the statistics in this chapter will readily show. Such organization is at least economical.

As has been shown, the eight-class systems are not very numerous in Germany, because the children of the *Volksschulen* do not have any desire to attend school after reaching the age of fourteen. Whether they have completed the work or not, they quit and begin some trade; and, if compelled, go on with their education in the continuation schools (*Fortbildungsschule*). For one reason or another, the larger part of the children do not reach the eighth class or do not complete it, and the authorities, therefore, do not think it necessary to have an eight-class system, but organize a seven-class system with an extra class built on top for those who wish to continue or finish the work of the eighth year. In 1910, of every one thousand children in Prussia who had completed the period of compulsory attendance, the following number had completed the various years :

The Most  
Desirable  
Number of  
Classes

- 448 had reached (not necessarily completed) the eighth school year.
- 261 had reached (not necessarily completed) the seventh school year.
- 181 had reached (not necessarily completed) the sixth school year.
- 88 had reached (not necessarily completed) the fifth school year.
- 22 had reached (not necessarily completed) the fourth school year.

From this it may be seen that less than 45 per cent of the children completed the work of the eighth school year on schedule time. Retardation plays a large rôle in Prussia as well as in America. The government allows the large cities of Prussia the choice between a seven- and eight-class system. A six-class system is

now looked upon as being undeveloped, although the General Regulations of 1872 consider the six-class school a full school, while they do not mention the seven- and eight-class schools, which have developed since that time.

Berlin, up to 1914, had an eight-class system. From Easter, 1914, the classes were numbered from VII to I, and I a. (*Oberklasse*). This was done because some of the cities in Greater Berlin could not organize eight-class schools. Berlin proper has an eight-class system, but the classes are numbered as given above because there are so many children who leave school just at the end of the seventh year or what is now called the first class. If a boy or girl has a school certificate from the first class, he or she will get a much better position than if the leaving certificate is for the second class, as would be the case if the classes were numbered from VIII to I. In addition the course of study has been changed so that there will be a natural, well-rounded off stopping place at the end of the seventh year, and, indeed, a special course for those who can only complete the work of the sixth year within the compulsory period. Thus, at present, there is uncertainty as to which system is preferable.

The one-class school consists of three sections, the lower section (1-3 school years), the middle section (4-5 school years), and the upper section (6-8 school years). Enrollment of children of compulsory school age takes place only once a year. This enrollment occurs, in schools which have a second session, on the first school days in May; in all others in the last week days of the Easter vacation. All children are of school age who have completed the sixth year, or who will have completed it within three months after their enrollment.

The summer semester begins on the first of May, the winter semester after the autumn holidays in October, and not, as

formerly, on the first of November. The organization of the summer term is planned according to local conditions. The upper and middle sections have, on the average, eighteen hours per week, every day from 6.45 A.M. to 9.45 A.M., and the lower section thirteen and a half hours, from 10 A.M. to 12.15 P.M.

In the winter the three sections in the undivided schools are all taught at the same time. The half-day school (the divided one-class school) works in the summer according to the program of the summer school.<sup>1</sup> In the winter the upper and middle sections are taught as one class, while the lower section has its lessons alone. The upper and middle sections receive twenty hours' instruction, and the lower section twelve. The divided one-class school may be established only with the consent of the administrative county board.

## SCHEDULE OF HOURS — ONE-CLASS SCHOOL

TABLE A. SUMMER SCHOOL

SUBJECTS	LOWER SECTION		MIDDLE AND UPPER SECTION	
Religion . . . . .	$\frac{4}{2}$	2	$\frac{6}{2}$	3
German { . . . . .		7		5 $\frac{1}{2}$
Writing } . . . . .				
Arithmetic . . . . .	$\frac{6}{2}$	3		3
Geometry . . . . .				
History . . . . .				1
Geography . . . . .				1
Nature . . . . .				1
Singing { . . . . .	$\frac{3}{2}$	1 $\frac{1}{2}$	$\frac{3}{2}$	1 $\frac{1}{2}$
Gymnastics } . . . . .				
Drawing . . . . .				1
Handwork . . . . .				(1)
Total Hours . . . . .		13 $\frac{1}{2}$		18(19)

<sup>1</sup> Table A.

## PRUSSIAN ELEMENTARY SCHOOLS

TABLE B. WINTER SCHOOL

## UNDIVIDED ONE-CLASS SCHOOL

SUBJECTS	LOWER SECTION	MIDDLE SECTION	UPPER SECTION
Religion . . . . .	4	5	5
German . . . . .	II	7	6
Writing . . . . .		2	I
Arithmetic . . . . .	4	4	4
Geometry . . . . .			I
History . . . . .		2	2
Geography . . . . .		2	2
Nature . . . . .		2	2
Singing . . . . .	I	2	2
Drawing . . . . .		I	2
Handwork . . . . .		(2)	(2)
Physical Training . . . . .		3	3
Total Hours per Week . . . . .	20	30 (32)	30 (32)

## WINTER SCHOOL

TABLE C. DIVIDED ONE-CLASS SCHOOL

SUBJECTS		LOWER CLASS	UPPER CLASS (Upper and middle section)	
Religion . . . . .	$\frac{6}{2}$	3	$\frac{8}{2}$	3
German } . . . . .		7		5 $\frac{1}{2}$
Writing } . . . . .		2		4
Arithmetic . . . . .	$\frac{4}{2}$			I
Geometry . . . . .				I
History . . . . .				I
Geography . . . . .				I
Nature . . . . .				I
Singing (united with German and Religion) . . . . .			$\frac{2}{2}$ $\frac{2}{2}$	I
Physical Training . . . . .				1 $\frac{1}{2}$
Drawing . . . . .				I
Handwork . . . . .				(2)
Total . . . . .		12		20 (22)



TABLE D.—ONE-CLASS SCHOOL (THREE SECTIONS, TWO OF WHICH ARE ALWAYS UNITED)

SUBJECTS	LOWER		MIDDLE	UPPER
Religion . . . . .	$\frac{5}{2}$	3	3	3
German . . . . .		7	6	6
Writing . . . . .			2	1
Geometry . . . . .				1
Arithmetic . . . . .	$\frac{5}{2}$	3	4	4
History . . . . .			$2 \times \frac{3}{4}$	$1\frac{1}{2}$
Geography . . . . .			$2 \times \frac{3}{4}$	$1\frac{1}{2}$
Nature . . . . .			$2 \times \frac{3}{4}$	$1\frac{1}{2}$
Singing . . . . .	$\frac{2}{2}$	1	$\frac{2}{2}$	1
Drawing . . . . .			1	1
Physical Training . . . . .			$\frac{3}{2}$	$1\frac{1}{2}$
Handwork . . . . .			(2)	(2)
Total . . . . .		14	23 (25)	23 (25)

For an explanation as to the working of the above table, see the corresponding weekly program on page 243. If this sort of organization is not possible, the following schedule for a half-day school may be adopted. This arrangement of the hours is typical for half-day schools.

## HALF-DAY SCHOOL

SUBJECTS	LOWER SECTION	MIDDLE SECTION	UPPER SECTION
Religion . . . . .	4	6	6
German . . . . .	9	9	8
Arithmetic and Geometry . . . . .	4	4	5
Drawing . . . . .		1	1
Science . . . . .		6	6
Singing . . . . .	1	2	2
Physical Training . . . . .	2	2	2
Handwork . . . . .		(2)	(2)
Total Hours . . . . .	18	30 (32)	30 (32)

Since the half-day school ordinarily must be organized on account of lack of room, and since all three sections cannot be taught at one time, it is always possible to unite two sections for instruction. When fourteen hours a week are arranged for the lower section, the hours can be scheduled as in Table D.

THREE-CLASS SCHOOL WITH TWO TEACHERS

	(A) SUMMER SCHOOL				(B) WINTER SCHOOL		
	III	II	I		III	II	I
Religion . .	$\frac{4}{2}$ 2	3	$\frac{6}{2}$ 3	2	4		4
German . .	7	$4\frac{1}{2}$	$4\frac{1}{2}$	7	(5) $5\frac{1}{2}$	(6) $6\frac{1}{2}$	
Writing . .		I	I		2		I
Arithmetic .	$\frac{6}{2}$ 3	3	$\frac{6}{2}$ 3	2	4		4
Geometry .							I
History . .		I	I		2		2
Geography .		I	I		I		2
Nature . .		I	I		I		2
Singing . .	$\frac{3}{2}$ $1\frac{1}{2}$	I	I	I	I		2
Physical Training .		$\frac{3}{2}$ $1\frac{1}{2}$	$\frac{3}{2}$ $1\frac{1}{2}$		(2) $1\frac{1}{2}$	(2) $1\frac{1}{2}$	
Drawing . .		I	I		I		I
Handwork .		(I)	(I)		(2)		(2)
	$13\frac{1}{2}$	18 (19)	18 (19)	12	23 (25)	27 (29)	

III. Class embraces 1-3 school years, lower section.

II. Class embraces 4-5 school years, middle section.

I. Class embraces 6-8 school years, upper section.

Summer school is from the first of May to autumn vacation in October.

In the summer the third class is divided in German and arithmetic. The first teacher takes the first section in these subjects. In the other subjects both sections are taught by the second teacher.

The following division of hours between the teachers was adopted in one school.

## PROGRAM OF A THREE-CLASS SCHOOL WITH TWO TEACHERS

## I. TEACHER

## II. TEACHER

	WINTER	SUMMER		SUMMER	WINTER
Religion I . . .	3	4	Religion II . . .	3	4
German I . . .	4½	6½	German II . . .	4½	5½
Writing I . . .	1	1	Writing II . . .	1	2
Arithmetic I . . .	3	4	Arithmetic II . . .	3	4
Geometry I . . .		1	History II . . .	1	2
History I . . .	1	2	Geography II . . .	1	1
Nature I . . .	1	2	Nature II . . .	1	1
Geography I . . .	1	2	Drawing or } . . .	1	1
Singing I . . .	1	2	Singing II . . .	1	
Physical Training I. ½	1½ ½	1½ ½	Physical Training II ½ = 1½ ½		1½
German III a . . .	7		Religion III . . .	2	
Arithmetic III a . .	3		Arithmetic III b . .	3	III a & b 2
Singing or } . . .	1	1	German III b . . .	7	III a & b 7
Drawing II . . .			Singing III . . . ½ = 1½		1
			Drawing I . . .	1	1
Total Hours . . .	28	27		31	35

In the division of hours between the teachers in the winter, there are 35 hours for the second teacher and 27 hours for the first teacher, since the division in the lower section no longer continues. The necessary exchange is to be made, if possible, in technical subjects. The second teacher may give up writing in II for two hours and singing in III for one hour. Likewise drawing in I, drawing or singing in II, and singing in III may be used for equalization of hours, though here care must be taken, that drawing be given according to the new method and only by teachers who have been especially trained. Also in consideration of the unity of instruction it is the general practice to have the religion, German, and history of one class taught by the same teacher.<sup>1</sup>

A two-class school with two teachers is permitted only by the consent of the government, when a three-class school for local

<sup>1</sup>Regulation of April 11, 1904; *Amliches Schulblatt*, 1904, p. 42; April 15, 1909. *Am. Schulblatt*, 1909, pp. 33-34; 1910, pp. 89-90.

WEEKLY PROGRAM  
AN UNDIVIDED ONE-CLASS SCHOOL  
(Winter)

HOURS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9	I. II. Religion III.	I. II. Religion III.	I. Religion II. German III. German	I. II. Religion III.	I. II. Religion III.	I. II. Religion III. German
9-10	I. II. Arithmetic III.	I. History II. III. German	I. II. German III.	I. II. Arithmetic III.	I. II. History III. German	I. II. German III.
10-11	I. Writing II. III. German	I. Drawing II. III. German and Singing	I. II. Arithmetic III.	I. Geometry II. Writing III. German	I. Drawing II. German III. German and Singing	I. II. Arithmetic III.
11-12	I. Geography II.	I. German II.	I. Handwork II.	I. Physical Training II.	I. Geography II.	I. Handwork II.
1-2	I. German II.	I. Nature II.		I. German II. III.	I. Nature II.	
2-3	I. Singing II.	I. Physical Training II.		I. Singing II. III.	I. Physical Training II.	

Remark: I. = Upper Section. II. = Middle Section. III. = Lower Section.

UNDIVIDED ONE-CLASS SCHOOL  
(Winter)

HOURS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9	I. Religion II. German and Arithmetic III. German and Arithmetic	I. Religion II. German and Arithmetic III. German and Arithmetic	I. Religion and German II. German and Religion III. German and Religion	I. Religion II. German and Religion III. German and Religion	I. Religion II. German and Religion III. German and Religion	I. Religion and German II. German and Religion III. German and Religion
9-10	I. German II. Arithmetic and German III. Arithmetic and German	I. History II. Arithmetic and German III. Arithmetic and German	I. German II. Arithmetic and German III. Arithmetic and German	I. Geography II. Arithmetic and German III. Arithmetic and German	I. Nature II. Arithmetic and Religion III. Arithmetic and Religion	I. Arithmetic II. German and Arithmetic III. German and Arithmetic
10-11	I. Writing II. Arithmetic and German III. Arithmetic and German	I. Arithmetic II. German III. German	I. Drawing II. German and Singing III. German and Singing	I. Arithmetic II. German III. German	I. Geometry II. Writing III. German Singing	I. Drawing II. German III. Arithmetic and Religion
11-12	I. Geography II. German III. German	I. Singing II. German III. German	I. Handwork II. German III. German	I. Physical Training II. German III. German	I. Singing II. German III. German	I. Handwork II. German III. German
1	I. Nature II. German III. German	I. German II. German III. German	I. German II. German III. German	I. History II. German III. German	I. German II. German III. German	I. German II. German III. German
2	I. Arithmetic II. German III. German	I. Physical Training II. German III. German	I. German II. German III. German	I. German II. German III. German	I. Physical Training II. German III. German	I. German II. German III. German

## WINTER — HALF-DAY SCHOOL

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-8:40	Religion	Religion	Bible Reading Religion	Religion	Religion	Religion
8:40-9:15	German	German	German	German	German	German
9:15-9:50	Writing	Drawing	Singing	Writing	Drawing	Singing
9:50-10:05	Intermission		LOWER SECTION	Intermission		LOWER SECTION
10:05-10:45	Arithmetic	Arithmetic	Religion	Arithmetic	Arithmetic	Religion
10:45-11:25	Geography	History	German	Geography	Geography	German
11:25-12:00	Nature	Physical Training	Arithmetic	Nature	Physical Training	Singing
Noon	LOWER SECTION		UPPER AND MIDDLE SECTION	LOWER SECTION		
40 m.	Religion	Arithmetic	Handwork	Religion	German	
40 m.	German	German	Handwork	German	Arithmetic	
40 m.	German	German	Handwork	Arithmetic	German	

Remarks: The classes within the heavy lines are for the lower section which recites afternoons except Wednesdays and Saturdays. The other classes are for the middle and upper sections, which recite mornings, except for the handwork, which comes on Wednesday afternoon generally.

WEEKLY PROGRAM OF A ONE-CLASS SCHOOL IN WHICH TWO SECTIONS ARE TAUGHT TOGETHER

Time	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9	I. Religion II.	I. Religion II.	I. Arithmetic II.	I. Religion II.	I. Arithmetic II.	I. Religion II.
	I. History II.	I. German II.	II. Writing III. Religion Arithmetic	I. German II.	I. Drawing III. Religion German	I. German II.
9:25 9:55	I. German II.	I. Singing II.	II. Writing III. German Arithmetic	I. German II.	I. Singing II.	I. Singing II.
	II. Arithmetic III. Arithmetic German	I. Arithmetic III. German Religion	II. Spelling III. German Arithmetic	I. Arithmetic III. German Religion	I. Geometry III. German Arithmetic	II. Arithmetic III. German Arithmetic
9:55-10:05 Intermission	II. Spelling III. Religion German	I. Spelling III. Arithmetic German	II. Drawing III. German Singing	I. Spelling III. Arithmetic German	I. Writing III. German Singing	II. Writing III. Religion German
	I. Nature II.	I. Geography II.	I. Handwork II.	I. Nature II.	I. Geography II.	
45 m.	I. German II.	I. Handwork II.	I. Handwork II.	I. History II.	I. German II.	
	I. Physical Training II.	I. Handwork II.		I. Physical Training II.	I. Physical Training II.	
30 m.						

## SUMMER SCHOOL OF THE ONE-CLASS SCHOOL

## I. PLAN. UPPER AND MIDDLE SECTIONS

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
6:45-7:30	Religion	German	Religion	Religion	German	Religion
7:30-8:15	Arithmetic	History	Arithmetic	German	Arithmetic	Arithmetic
8:15-9:00	Geography	Nature Study	German	Geography	History Nature Study	German
9:00-9:45	German	Physical Training	Writing	Singing	Physical Training	Drawing
9:45-10:00	Recess	Recess	9:45-10:15 Handwork	Recess	Recess	9:45-10:15 Handwork
LOWER SECTION						
10:00-10:30	Religion	Arithmetic	Religion	Arithmetic	Religion	Religion
10:30-11:00		German	Arithmetic	German	Arithmetic	Arithmetic
11:00-11:45	German	German	German	German	German	German
11:45-12:15	German	Games or Singing	German	Games or Singing	German	Games or Singing



## SUMMER ONE-CLASS SCHOOL

## II. PLAN. UPPER AND MIDDLE SECTIONS

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
6:45-7:15	Religion	Religion	Religion	Religion	Religion	Religion
7:15-8:15	Arithmetic	German	Arithmetic	German	Arithmetic	German
8:15-8:45	History	Nature	Geography	History	Nature	Geography
8:45-9:45	German	Singing Physical Training	German Physical Training	Drawing	German	Singing Physical Training
9:45-10:15	Handwork			Handwork		

The lower section the same as in Plan II

## III. PLAN. UPPER AND LOWER SECTIONS

6:45-7:45	Religion	German	Religion	German	German	Religion
7:45-8:45	Arithmetic	Geography	Arithmetic	Nature	History	Arithmetic
8:45-9:45	German Writing	Physical Training	German	Drawing	Singing	German Physical Training
9:45-10:45					Handwork	

The lower section the same as in Plan I

reasons is not possible. In these courses of study it will be noticed that the girls always have two hours more per week than the boys. This is considered *extra* work.<sup>1</sup>

The organization of the *interna* of the school still rests upon the basis of the General Regulations of 1872, for few great changes in the relative value or importance of subjects have been made since that time. The chief modification was the addition of a third hour in physical training (1910), which was taken from the total number of hours in German, the subject probably best able to bear the loss. Gradually the total number of hours devoted to religious instruction had been brought back to the normal, whereas it had often occurred that the instruction in school and the confirmation instruction amounted to six hours weekly. The effort of the *Volksschule* to meet the demands of the times led to an overcrowding of the curricula; that is, more material was put into the different subjects than the children could assimilate, although the number of subjects remained the same. There was an overcrowding in reality, perhaps, from the German point of view. The government has continually struggled against the overfeeding of the children at the expense of their ability to digest. It was realized that there was too much memory work being done, and it was thought that by decreasing the subject matter both teachers and children would have more opportunity for real thought and independent work. It is likely, however, that the overcrowding of the curricula is not the cause of the mechanization of the schools. It is rather the method of instruction generally employed in the *Lernschule*. The ministerial order of January 31, 1908, emphasizes the latter point, for in this order, the minister advises that the method of questioning be somewhat neglected and the children be given a chance to do some independent work.

Every Prussian elementary school is divided into three sec-

<sup>1</sup> *Verfügung vom 18 Jan., 1912, Amtliches Schulblatt, No. 4.*

tions (*Stufe*). No matter whether it is a one-class or eight-class school, it has a lower section, a middle section, and an upper section, just as we in America might speak of the primary, intermediate, and grammar grades of a common public school. These sections are created for pedagogical reasons, radical changes in methods and in subject matter depending more upon the section a child may be in than upon the class within any given section. This division of schools into sections evidently arose from the time when all elementary schools were one-class schools and the children were divided into general age groups for the sake of rough classification, exactly as in American country schools which are ungraded, but divided up into age groups. The Regulations of October 13, 1872, said in regard to this matter:

§ 12. The *Volksschule*, even the one-class school, is divided into sections, which correspond to the different stages of age and advancement of the children. Where a *Volksschule* has four classes, the middle section has two classes, and if the school has six classes, each section has two.<sup>1</sup>

## B. COURSES OF STUDY

As has been said before, the curriculum of the Prussian *Volksschule* of to-day is practically the same as that determined by the General Regulations of 1872. The subjects of instruction according to these regulations are religion, German language (conversation, reading, writing, spelling, grammar), arithmetic, geometry, drawing, history, geography, nature, and singing, also, gymnastics for the boys and handwork for the girls. A study of the curricula which follow will show how the present-day courses vary from those of 1872.

Subjects of  
Instruction  
in Prussia  
in 1872

<sup>1</sup> As a rule the middle section comprises the fourth and fifth years of school work.

COURSE OF STUDY OF THE PRUSSIAN *VOLKSSCHULE* ACCORDING  
TO THE REGULATIONS OF 1872

	LOWER SECTION		MIDDLE SECTION		UPPER SECTION	
	One-Class School	Several-Class School	One-Class School	Several-Class School	One-Class School	Several-Class School
Religion . . .	4	4	5-6	4	5-6	4
German . . .	11	11	10-9	8	8-7	8
Arithmetic . . .	4	4	4	4	5	4
Geometry . . .						2
Drawing . . .			1	2	2	2
History			6	6	6	6 (8)
Geography }						
Nature . . .						
Singing . . .	1	1	2	2	2	2
Gymnastics . .		2	2	2	2	2
(Handwork) <sup>1</sup>		(2)	(2)	(2)	(2)	(2)
Totals . . .	20	22	30	30	30	30 (32)

As will be seen later from the courses of study of different cities, some minor changes have been introduced, or rather the subjects named above have been broadened, or called by different names. Physical training for girls has been introduced in practically all schools. Handwork has been added in comparatively few schools. At the first glance the program given above seems to neglect grammar, spelling, and composition, but these subjects are all included under the general heading "German." The *Realien* are *real* subjects, geography, history, physics, chemistry, botany, and zoölogy (biology). It will be noticed that the first years of the school are devoted largely to German, while the greater part of the remaining time is given to religion and arithmetic. At the beginning of the middle section new subjects, such as geography, history, and nature study, are introduced.

<sup>1</sup> For the girls.

The most striking difference between the German and American courses of study is the presence of religion in all German *Volksschulen*, and it claims a large portion of the total time. Physics and chemistry, in an elementary form, are more general in Germany than in America. Physical training is not always a part of the American course of study, while it is found invariably in the German *Volksschule*. The differences between the subjects of instruction in the lower schools in the two countries are discussed more in detail in the chapters relating to the several subjects.

Differences  
between  
American  
and German  
Courses

The courses of study given below at some length will present a clearer idea of the number of subjects taught and the time devoted to each, than a long discussion of the subject would do. The tables are taken from courses of study published by the various cities, except that the writer has computed the percentages in order to aid the reader in grasping more quickly the relative value of each subject. Naturally, a three-class or a one-class school cannot give so much material as an eight- or a seven-class school. It must also be remembered that while the course of study throughout Germany is rather uniform, the subject matter and the hours are not always uniformly divided. For example, what might be taught in Pomerania in the sixth year in geography might easily be given in Mecklenburg the seventh year or the fifth year. There is a rather definite amount of material which must be taught, but within this limit there is a very large degree of variation as to when any particular part of a subject shall be treated.

In general we may conclude that the city schools are organized in Germany on the seven- and eight-class basis, while the rural schools tend chiefly toward one-, two-, or three-class systems. The size of the class and the number of pupils per teacher fall between fifty and sixty. City schools are non-coeducational, while the country schools are mixed. With

Summary

## PRUSSIAN ELEMENTARY SCHOOLS

## ELEMENTARY SCHOOL IN BERLIN. EIGHT GRADES

SUBJECTS		CLASS YEAR	LOWER SECTION					MIDDLE SECTION				UPPER SECTION		
			VII	VI	V	IV	III	II	I	UPPER CLASS	TOTAL			
			1	2	3	4	5	6	7	8				
Religion	.	.	.	.	.	3	3	3	4	4	4	4	29	
German	.	.	.	.	.	8	8	8	7	7	6	7	57	
Observation	.	.	.	.	.	2	2	3 (2)					7	
Writing	.	.	.	.	.	2	2	2	I	I	I	I	8	
History	.	.	.	.	.				2	2	2	2	10	
Arithmetic	.	.	.	.	.	4	4	4	4	4	4	4	32	
Geometry	.	.	.	.	.				I	(o)	(o)	(I)	7	
Science	.	.	.	.	.				W. I	2	4	4	15	
									S. 2		(3)	(3)	16	
									W. 2	2	2	2	10	
Geography	.	.	.	.	.				I				9	
Physical Training	.	.	.	.	.	$\frac{1}{2}$	2	2	3 (2)	3	3	3	19 $\frac{1}{2}$	
Drawing	.	.	.	.	.	$\frac{1}{2}$	2	2	2	2	2	2	12	
Singing	.	.	.	.	.		I	2	2	2	2	2	13 $\frac{1}{2}$	
Handwork	.	.	.	.	.			(2)	(2)	(2)	(3)	(3)	(15)	
Totals	.	.	.	.	.	18	22	26	28 (20)	(30)	(32)	(32)	220(221)	

Numbers in parentheses indicate hours for girls.

## VOLKSSCHULE IN STUTTGART. EIGHT GRADES

CLASSES (I IS THE LOWEST)

SUBJECTS	I	II	III	IV	V	VI	VII	VIII <sup>1</sup>	PER CENT OF TOTAL TIME
Religion									
(a) Teacher	4	4½	4½	5	5	2	1	2	18.6 (17.3)
(b) Pastor					5	4	5	2	
Reading			5	2	1	2	1	2	
Writing			2½	2	3	3	3	1	
Spelling			2½	2	2	2	2	2	
Composition	10	10½	1½	1½	1½	1½	1½	1	37.0 (34.5)
Grammar			1½	2	2	2	2	2	
Arithmetic	3	4	5	5	5	5	5	5	17.2 (15.4)
Realien	2	2	2	4	4	4	4	7	13.4 (10.6)
Singing	1	1	1½	1½	1½	1½	1½		4.4 (4.5)
Drawing				2 (4)	2 (0)	2 (0)	2 (0)	2	3.7 ( )
Physical Training				(4)	2	2	2	2	4.6 (3.8)
Handwork	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(2)	0.9 (13.5)
Totals	20 (24)	22 (26)	26 (30)	27 (31)	30 (32)	30 (32)	30 (32)	30	21.5 (20.7)

<sup>1</sup> The eighth class is found only in boys' schools.

## VOLKSSCHULE IN DANZIG. SIX GRADES

CLASSES (I IS THE HIGHEST CLASS)

SUBJECTS	VI	V	IV	III	II	I	PER CENT OF TOTAL TIME
Religion . . . . .	4	4	4	4	4	4	31.4 (32.1)
German . . . . .	II (II)	IO (II)	IO (IO)	8	8	8	17.2 (17.2)
Arithmetic . . . . .	4	4	5	4	4	4	15.4 (15.4)
Geometry . . . . .						2	1.23 ( )
History . . . . .			I	2	2	2	4.3 (4.3)
Geography . . . . .			I	2	2	2	4.3 (4.3)
Biology . . . . .			I	2	2	2	4.3 (4.3)
Physics and Chemistry . . . . .					2	2	2.4 (2.4)
Singing . . . . .	I	I	2	2	2	2	6.1 (6.1)
Drawing . . . . .		I	2	2	2	2	5.5 (4.93)
Physical Training . . . . .	2	2	2	2	2	2	7.4 (2.4)
Handwork . . . . .		2	2	2	2	2	(4.9)
Total Hours . . . . .	22 (20)	22 (22)	28 (28)	28 (28)	22 (22)	22 (20)	162 (162)



## VOLKSSCHULE IN HANNOVER. SEVEN GRADES

## CLASSES (ASCENDING FROM VII TO I)

SUBJECTS	I	II	III	IV	V	VI	VII	PER CENT OF TOTAL HOURS
Religion . . . . .	4 (4) <sup>1</sup>	4 (4)	4 (4)	4 (4)	4 (4)	4 (4)	3 (3)	14.4 (14.2)
German . . . . .						2 (2)	3 (3)	
Observation Work . . . . .								
Home-study . . . . .								
Reading, Literature . . . . .	3 (2)	2 (2)	2 (2)	3 (3)	4 (4)	5 (5)		
Grammar, Spelling . . . . .	4 (4)	4 (4)	4 (4)	3 (3)	4 (4)	2 (2)		
Composition, Dictation . . . . .							9 (9)	36.9 (33.3)
Writing and Business Composition . . . . .	1 (1)	2 (2)	2 (2)	3 (3)	3 (3)	4 (4)		
Arithmetic . . . . .	4 (4)	4 (4)	4 (4)	4 (4)	4 (4)	4 (4)	4 (4)	14.9 (13.7)
Geometry . . . . .	3 (3)	2 (2)	( )	( )	( )	( )	( )	2.6
Drawing . . . . .	2 (2)	2 (2)	2 (2)	2 (2)	1 (1)	( )	( )	4.7 (4.7)
History . . . . .	2 (2)	2 (2)	2 (2)	1 (1)	( )	( )	( )	3.7 (3.1)
Geography . . . . .	2 (2)	2 (2)	2 (2)	2 (2)	1 (1)	( )	( )	4.7 (4.7)
Nature Study . . . . .								
1. Physics and Chemistry . . . . .	3 (3)	2 (2)	2 (2)	2 (2)	1 (1)	( )	( )	5.3 (3.1)
2. Botany — Zoölogy . . . . .	2 (2)	2 (2)	( )	( )	( )	( )	( )	1.0 (2.1)
Singing . . . . .	2 (2)	2 (2)	2 (2)	2 (2)	1 (1)	2 (2)	2 (2)	4.7 (4.7)
Physical Training . . . . .	2 (2)	2 (2)	2 (2)	2 (2)	2 (2)	1 (1)	1 (1)	6.6 (5.7)
Handwork . . . . .	3 (3)	4 (4)	4 (4)	2 (2)	4 (4)	2 (2)	( )	10.0 (10.0)
Total Hours a Week . . . . .	32 (30)	32 (30)	28 (30)	28 (30)	25 (27)	22 (24)	20 (20)	187 (189)

<sup>1</sup> The figures in parentheses represent the number of hours which the girls have.<sup>2</sup> Singing in the two lowest classes is given in connection with the observational work.

## VOLKSSCHULE IN MUNICH. SEVEN GRADES. (BAVARIA)

SUBJECTS	I <sup>1</sup>	II	III	IV	V	VI	VII	PER CENT OF TOTAL TIME
Religion . . . . .	2	2	3	3	3	3	2	9.7 (9.4)
German . . . . .	10	10	10 (9)	10 (9)	8 (7)	8 (7)	8 (7)	35.1 (30.8)
Arithmetic . . . . .	6	6	6	6	6 (2)	6	6	22.7 (22.0)
Geography . . . . .					3	3	2 (3)	
History . . . . .			2	2			2	13.0 (10.5)
Biology . . . . .			( <i>Heimatkunde</i> ) <sup>2</sup>					
Physics and Chemistry . . . . .					2	2	2	
Writing . . . . .		2	2 (1)	2 (1)		2 (1)	2 (1)	3.2 (2.1)
Free-hand Drawing . . . . .					4 (2)	3 (2)	3 (2)	5.4 (3.1)
Singing . . . . .	1	1	1	1	1	1	1	(3.8)
Physical Training . . . . .	2	2	2	2	2	2	2	7.6 (7.2)
Handwork . . . . .	(2)	(2)	(3)	(3)	(4)	(3)	(4)	(11.0)
Totals . . . . .	21 (23)	23 (25) <sup>1</sup>	26 (27)	26 (27)	29 (29)	30 (30)	30 (30)	185.0 (191.0)

<sup>1</sup> The I. class is the lowest.<sup>2</sup> *Heimatkunde* is local geography, history, and the like. In Munich an eighth year is offered for those children who wish to attend in preference to attending the continuation schools, which are compulsory for three years after the completion of the first period of compulsory attendance.

The subjects offered for boys are as follows:

COURSE OF STUDY FOR BOYS IN MUNICH FOR  
THE EIGHTH YEAR

SUBJECTS	HOURS
1. Religion . . . . .	2
2. Composition and Reading . . . . .	4
3. Civil Government . . . . .	2
(a) History of hand-working industries before the French Revolution	
(b) Development of industry, trade, and commerce in nineteenth century	
(c) Industrial and social legislation. Bavarian and German Constitutions	
4. Nature Study — Study of industry . . . . .	5
(a) Hygiene . . . . .	1 Hour
(b) Study of tools and industrial materials . . . . .	2 Hours
(c) Industrial machines and their principles . . . . .	2 Hours
5. Arithmetic including geometry and book-keeping . . . . .	6
6. Drawing . . . . .	7
(a) Free-hand drawing . . . . .	3 Hours
(b) Projectional drawing . . . . .	3 Hours
(c) Working models . . . . .	1 Hour
7. Manual Training . . . . .	6
8. Physical Training . . . . .	2
Total . . . . .	34

The girls who attend the eighth class have the following instruction:

COURSE FOR GIRLS IN MUNICH FOR THE  
EIGHTH YEAR

SUBJECTS	HOURS
1. Religion . . . . .	2
2. Housekeeping and Cooking . . . . .	8
3. German . . . . .	6
4. Handwork (Sewing) . . . . .	4
5. Arithmetic . . . . .	4
6. Singing . . . . .	1
7. Drawing . . . . .	2
8. Physical Training and games with singing . . . . .	2
Total . . . . .	29

very few exceptions, all schools are on the confessional basis. The subjects of instruction are religion, German (which includes reading, writing, spelling, composition, and grammar), arithmetic, history, botany, zoölogy, physics, chemistry, physiology (and hygiene), singing, drawing, physical training, and handwork for girls.

BOYS' *VOLKSSCHULE* IN HILDESHEIM. SEVEN GRADES

SUBJECTS	CLASSES								
	Lower Section		Middle Section			Upper Section			Total
	VII	VI	V	IV	III	II	I	Hours Percent- age	
Religion . . . . .	3	3	4	4	4	4	4	26	
German . . . . .	10	10	7	6	6	6	6	51	
Arithmetic . . . . .	4	4	4	4	4	4	4	28	
Geometry . . . . .						2	2	4	
Geography . . . . .			1	2	2	2	2	9	
History . . . . .				2	2	2	2	8	
Botany and Zoology .						2	2	4	
Physics and Chemistry			1	1	1	2	2	7	
Writing . . . . .		3	2	2	2	1	1	11	
Drawing . . . . .			2	2	2	2	2	10	
Singing . . . . .	1	1	1	2	2	2	2	11	
Physical Training . .			2	3	32	3	3	14	
Totals . . . . .	18	21	24	28	28	32	32	183	100

## CHAPTER XIII

### METHODS OF INSTRUCTION AND ORGANIZATION OF SUBJECT MATTER

UNTIL the end of the seventeenth century the subject matter held the place of chiefest importance in the field of elementary instruction, for it was thought what was taught required no particular application of method in order to be assimilated by the children. Memorization naturally was the basis of such instruction, and this theory of learning, though not advanced by many teachers at the present time, is very largely practiced. Ratich and Comenius in the first part of the seventeenth century, and the Pietists in the latter part of the same century, tried to use methods whereby the subject matter would be made more easy of acquirement. Greater consideration was given the pupil, and the methods employed were suited more closely to the psychological nature of the child's mind. One of the direct results of such methods was a wider use of the mother tongue as the language of the school, and a more extensive study of history and nature.

This tendency on the part of the Pietists was carried still further by the Philanthropinists, who held that learning should not only be made easier by being made to fit the psychological tendencies of the child mind, but that it should be spiced and sweetened and made attractive, in fact, almost converted into play for the children.

Pestalozzi (1746-1827) looked upon method and subject matter as a means of developing intellectual and spiritual power. The school was not merely to be a place to learn, but a place where the children should be educated and trained. The question

with Pestalozzi was not the acquisition of mere facts and knowledge, but rather the development of intellectual and spiritual

**Purpose of Education According to Pestalozzi** capacities — and, in some senses, formal training. Subject matter was of importance only in so far as it furnished exercises for thought, speech, and action. Pestalozzi's successors tried to combine the acquisition of knowledge and the development of power as the end to be attained by instruction.

With Herbart and his followers the aim and end of instruction was the formation of moral and religious character. It was not Herbart's intention merely to furnish the child with a definite number of concepts by the form and content of the instruction and subject matter, but rather to shape thereby the will and directly to affect the moral nature and attitude of the child.

There is naturally at the present time in Germany great divergence of opinion as to the purpose of instruction in the *Volksschule*. German school men agree that the purpose of the instruction in the elementary school is not merely the acquirement of certain facts and of certain ability to do this or that thing, but rather the regular development of the natural tendencies and capacities of the child, because it is only in this way that a sufficient training can be acquired. Efficient citizenship is the purpose of education. It is generally considered the specific business of the *Volksschule* to furnish that general training which every one must possess in order to be socially efficient. Other schools may furnish broader and more specific training, but the *Volksschule* should lay the foundation.

From the German point of view the *Volksschule* must satisfy the following points:

1. Make good *German* citizens out of the pupils.
2. The instruction given in the elementary classes must afford the children enough material, practical facts, and knowledge of how to do

things so that they may understand their environment and their intellectual and spiritual inheritance. There are certain linguistic, geographical, scientific, mathematical, and historical facts, as well as reading and writing, which are absolutely necessary for every person, no matter what occupation he may follow in life.

3. The formal training of intellectual powers is generally considered to be one of the tasks of the *Volksschule*. The child's faculties of observation, comparison, and reasoning must be developed. This old conception of formal training is still the prevalent one in Germany among many teachers. The leading school men, however, no longer hold to the theory of properties of memory, reasoning, and the like. Schwochow says:<sup>1</sup> "Experience and the newer psychology teach that subject matter produces formal training only within the subject to which it is related; or intellectual power, which we call formal training, holds good only in that group of conceptions to which it is itself related. This rule holds for all intellectual powers: memory, will, understanding, and imagination. For example, a pupil well drilled in grammar is not thereby qualified to form logical conclusions in geometry, if his thinking is not trained in this direction. He, who retains readily the words of a foreign language, often finds difficulty in remembering dates and names of places."

4. As a result of the practical and industrial tendency of the age, there is a growing demand on the part of some of the progressive school men that the fundamentals of vocational education be laid in the *Volksschule*. Kerschensteiner<sup>2</sup> says that the first and most important task of the public school is trade or occupational training, the foundations or preparation for which can be begun at least in the *Volksschule*.

5. Among the leaders in educational thought in Germany there is a demand upon the *Volksschule*, which is fulfilled only to a small degree, that the children be trained to do productive work.

The selection and choice of subject matter for any school depend on the aim and purpose of that particular institution. The aim of the German *Volksschule* as stated above helps explain the elementary course of study. It is the purpose of the *Volksschule* to give an elementary general training. Upon examining the course of study we

**Selection of  
Subject  
Matter**

<sup>1</sup> *Methodik des Volksschulunterrichts*, p. 12.

<sup>2</sup> *Begriff der Arbeitsschule*, p. 23.

are impressed first by the lack of manual training for the boys, and second, by the fact that each subject is given in its barest and most fundamental elements. Everything that pertains to training for a trade or occupation is eliminated, except in towns and cities where manual training and bookkeeping have been introduced. That there are exceptions to the foregoing statements goes without saying.

Attention will be called to the character of the course of study in the separate chapters dealing with the teaching of the various subjects found in the elementary curriculum. It is only necessary to remark here that all occupational instruction and indeed much that is included in the American elementary curriculum are omitted from the curriculum of the German *Volksschule* because the continuation and trade schools assume the responsibility for the occupational training of the youth. The majority of pedagogical thinkers in Germany believe that it lies without the province of the elementary schools to impart instruction of technical trade or occupational character.

Another very notable characteristic of German curricula is their brevity. The subject matter in the lower schools is pared down to the bare essentials. The principles of selection are essentiality, psychological fitness, objectivity, and contemporaneousness. For example, in natural science only such facts are included in the curricula as can be gained by observation or concrete representation. Scientific systems, names, classes, families, characteristics, rules, laws, and all such abstract matters are excluded.

But, after all, the curriculum of the *Volksschule* is largely an inheritance handed down from generations long past, and many parts of it have survived several centuries. Two of the newer subjects are housekeeping and cooking for girls. Civil government (*Bürgerkunde*) has been

Limits of  
the Field of  
the *Volksschule*

Principles  
of Selection  
of Subject  
Matter

New  
Subjects



admitted in some places, as has also handwork or manual training.

Each German elementary school has a course of study (*Lehrplan*). In Prussia it is based on the General Regulations of 1872. The course of study contains an outline of the subject matter of the particular subjects of instruction and divides the matter into courses for the several classes of the school. It also states the aim or purpose of each subject and usually gives general rules or principles of method. A great deal of value is laid upon this course of study and it is issued either by the administrative county board or by the city school deputation with the former's approval. The teacher has nothing to do with its formulation. The course of study shows not merely the sequence of subject matter or of single course, but also the parallelism of subject matter and topics and their connection. As far as we have observed, the course of study allows the teacher a great deal of freedom as to choice of topics and methods. He is practically unhindered in the use of any good method. The detailed course of study (*Lehrstoffverteilungsplan*), which is mentioned below, is made either by the teacher or the school, and only seldom by the higher school authorities. The *Lehrplan* merely shows the way in big outline.

The value of a general course of study for American schools is apparent. Such a course establishes a minimum and sets no maximum, and prescribes no method. Its greatest advantage is in regard to school administration and management, in that children may transfer from one school to another, from one state or county to another without a great loss of time, such as is almost always occasioned by transfers in our schools. But we know the time of any national agreement on a course of study for our elementary schools is a long way off, and may never come, owing to the great differences in local conditions and traditions.

In the sixteenth century the curriculum of the *Volksschule* was thoroughly of a religious nature. It consisted of catechism, reading, and singing of church songs, and occasionally writing and arithmetic. During the seventeenth century the elements of arithmetic, history, geography, and natural science were made a part of the work of the elementary schools, which additions can possibly be ascribed to the effect of empiricism and realism. The *Schulmethodus* of Duke Ernst of Gotha represented this new movement in elementary education. Under the influence of Pietism and Philanthropinism in the eighteenth century, the religious instruction was enlarged by the addition of Biblical history and sacred song; the German was enriched by oral and written exercises; and singing was improved by the use of secular songs. In the general Rural School Regulation of 1763, some of these innovations were included, but only to a very limited extent.

Prussia, during the nineteenth century, issued two official courses of study, the Regulation of 1854 by Stuhe, and the General Regulation of October 15, 1872, by Dr. K. Schneider. The new subjects introduced were physical training, drawing, and handwork for the girls. Consequently, at the present time the Prussian curriculum for the *Volksschule* contains religion, German (speaking, reading, writing), arithmetic and geometry, drawing, singing, history, geography, science, physical training, and handwork for the girls. Nothing further need be said concerning the principles on which the choice of subject matter is made. They are just the same in German schools as in our own and so well known that we have only mentioned them.

In Germany, the subject matter, which has been chosen for presentation, is arranged sometimes on the basis of one of three theories: that of organization of subject matter in concentric circles, that based on the cul-

Develop-  
ment of the  
German  
Course of  
Study

Present  
Course

Arrange-  
ment of  
Subject  
Matter

tural development of the race, and that of correlation and concentration. Up to the present time, the concentric circle theory has had the most followers in German education. According to this theory the relatively easiest and most important knowledge is placed in the first year's work, and thereafter, with a repetition of that which has already been studied, the circle or sphere of knowledge is widened, more and more each year, so that finally the subject matter lies like rings about the first year's work, which forms the center of the whole structure.

Concentric  
Circle  
Theory

The advantages of the concentric theory are: 1. The instruction can be made to fit the intellectual development of the pupil in every grade. 2. The child's apperceptive mass aids in learning new material. 3. Constant repetition assures the assimilation of the subject matter. 4. A rounded and complete conception of the matter is afforded by means of the frequent reviews and treatment of the same material in different grades. 5. Pupils are able to leave with a completed sphere of knowledge, if they cannot finish the whole course of the school.

On the other hand, Herbartians find fault with this theory on the ground that there is not close enough connection among the various subjects of instruction, that in the upper classes little new material can be offered the children, and that by constant repetition and expansion of old material the pupils lose interest and become indifferent. In short, the theory of concentric circles produces indifference, boredom, overloading, and disorder. (Rein.)

Another theory of organization of subject matter which we find in the German course of study is that agitated by Ziller. It is the culture epoch theory, which bases itself on the assumption that the child in its development repeats the experience of the race; that is, the child goes through the same stages of development that the race has gone

Culture  
Epoch  
Theory

through. According to this theory a sphere of thought, character-building material, shall be taken up as the middle point of each year's work. The other subject of instruction shall be correlated and concentrated about this central point. Ziller selected the following historical circles of thought on which to base his course of study:

First year: Twelve fairy stories.

Second year: Robinson Crusoe.

Third year: The Patriarchs. Thuringian or other German myths.

Fourth year: Stories of heroes. The Judges. The Nibelungen.†

Fifth year: Israelitish kings and prophets. German emperors from Karl the Great to Rudolph of Hapsburg.

Sixth year: Life of Jesus. Migration of the races. Papacy and the empire. Crusades.

Seventh year: Apostolic history. Age of discovery. The Reformation. The Thirty Years' War.

Eighth year: Luther's Catechism. Age of Frederick the Great. War of Liberation. Reestablishment of the German Empire.

This theory of Ziller's has not found much acceptance in Germany for the simple reason that there is no proof for the assumption on which the whole plan of organization is based. Further, Ziller's eight-step theory is applicable only to systems which have eight grades. Also, it is not very probable that nature and history have so arranged themselves in eight successive psychological steps, simply because the Prussian sets the period of attendance at eight years.

The Herbartians, Ziller, Dörfeld, and Rein, with the theory of correlation and concentration of instruction, dominate the German elementary school to-day. The course of study, or rather the subject matter in its arrangement and organization, is Herbartian. There are, of course, different schemes of correlation. Some Herbartians seek to establish interrelations among subjects, while others group the various subjects and correlate these groups. There

are few teachers in Germany who do not believe in the theory of correlation, but a very large number object to the strained efforts of many followers of Herbart to establish interrelations which are entirely artificial. Another objection made by the systematic German is that through too much correlation a subject loses its independence, which makes a logical presentation more difficult.

Reformers in Germany to-day demand that the child be made the center of all instruction. The course of study should be arranged according to the intellectual development and the interest of the pupils. The pupils shall be the point of concentration. The home, the environment, and the cultural development of the fatherland shall be the points around which the subject matter shall be grouped. Correlation of related subjects and topics is taken as a matter of course.

There is a group of reformers in Germany at the present time which demands an undifferentiated course of study for the first year's work. Such a course does not contain reading, writing, and arithmetic as formal subjects but interlaces and correlates them with all the work and play activities of the school. Work, as a principle of method, is the foundation stone of this scheme of organization of subject matter. This type of course of study and the methods necessarily entailed thereby are rather common in the larger city systems of Germany. Frequently this type of instruction does not occupy the whole first year, but only a half-year, or until the children get acquainted with their playmates and teachers and are thoroughly at home with the business of going to school. The chief advantages of the undifferentiated course of study are that the methods employed under such a system necessarily involve greater activity on the part of the children, and that the formalism of the ordinary routine subject is entirely avoided. The school of Behrtold Otto in Lichterfelde near

Undifferen-  
tiated  
Course of  
Study for  
Beginners

Berlin furnishes abundant evidence of the value of this type of instruction.

One hears a great deal to-day in Germany of the *Arbeitschule* (work-school). It must be said, however, that one hears much more of this kind of school than one sees. Under the *Arbeitsschule* one groups together all those movements of pedagogical reform which seek to intensify the work done in the school and to mold the training of the children to meet contemporary needs. The name arose out of contrast to the "book-school" or the "learning-school" (*Buchschule* or *Lernschule*). This movement is a new one and it is very difficult to state the real difference between the typical *Volksschule* designated "learning-school" and one designated as a "work-school." The difference is very noticeable to a visitor. In one the children are merely learning, and in the other they are learning by doing.

The customary method of instruction has for its aim the acquirement of a prescribed set of facts. Its purpose is the acquisition of knowledge. The danger in this method is that knowing and doing are never more than artificially connected. The child never has the right sort of interest in mere "learning-work," and as a result what has been learned is very easily forgotten.

The method employed in the "work-school" starts from the child rather than from the subject matter. The child is the central point of interest. Its aim is to develop all the mental and physical activities of the child, to educate the child up to independence of thought and action through self-activity.

The idea of the *Arbeitsschule* has employed the minds of German educational theorists for many years. It comes down to us from Comenius, Pestalozzi, and Froebel to the present time. Its present appearance is partly due to experimental

psychology, which lays great importance on the influence that muscular sensations have upon the intellectual development of the child. Further, the entire social situation demands a great place for the practical activities. The more industry vanishes from the home and is concentrated in factories, so much the more are "work-instruction" and the "work-school" necessities in our educational systems.

Historical  
Develop-  
ment

Even if the idea of the "work-school" in Germany is not new, it cannot help but make the typical methods more fruitful and effective. Among the majority of German school men at the present time there seems to be a lack of clearness as to the function of the "work-school."

Work as a  
Principle of  
Instruction

They feel that there must be some agreement between shopwork instruction, which emphasizes the practical work as a discipline, and the *Arbeitsschule*, which lays stress upon manual activities as an educative factor. To many reformers the introduction of shopwork into the schools is a practical, real means of accomplishing the aim of the *Arbeitsschule*. They base their demand for such work in the school upon the influence which the hand has for the development of intellectual life. It is not to be denied, however, even if it were psychologically proven that the acquirement of spatial concept were dependent on manual activities, that it would still be uncertain how far hand-work is able to affect the other mental functions. Likewise it remains to be proven, whether the principle of the *Arbeitsschule* can be solved only in connection with workshop instruction, or whether it is to be considered a pure didactic imperative.

The Minister Trott zu Solz, in writing of this matter in 1911, said :

Whence it follows that the construction work, known by the name of *Werkunterricht* (manual work), shall arise from the needs of all subjects of instruction, and that a new course of study is not needed which would re-

<sup>1</sup> *Zentralblatt*, 1911, p. 394.

quire *Werkunterricht* as a new subject of instruction alongside the other usual school activities. Also construction work cannot be limited to a single subject. Rather it must be employed wherever observation appears necessary or wherever the object itself awakens within the child the constructive instinct or the desire. If the educative purpose of construction work is always kept securely in mind, it cannot develop into mere play.

At the present time the most discussed problem in German educational circles is in regard to *work* in the school as opposed to mere learning. The whole matter resolves itself into the question of whether the child shall do independent work, be it manual or intellectual or both, or whether the child shall merely study a book. The school of reformers at Dortmund sums the matter up well when it says:<sup>1</sup>

We stand for a "work-instruction" in which so far as possible the pupil works out independently his own world, the real as well as the historical, be it through observation or experiment, or be it through reading or questions.

In addition to containing an inner scheme of organization of subject matter, the course of study of a German elementary school must be definite in regard to some other points.

Outer Char-  
acteristics  
of the Gen-  
eral Course  
of Study

They have to do with the outward form of instruction. 1. The course of study must set the aim to be accomplished in each particular in each grade and in the whole school. 2. An outline of the subject matter of each subject for every grade. 3. The length of the course and the number of hours weekly in each subject and in each grade. 4. Regulations in regard to work to be done at home. 5. Regulations regarding general methods, teaching material, and books.

In addition to a *Lehrplan*, each school or class has an outline course of study (*Stoffverteilungsplan*). It is merely a detailed course of study. The subject matter, given in large outline in the general course of study, is divided up among the weeks

<sup>1</sup> *Dortmunder Arbeitsschule*, p. 1.



of the year or half year. It is to be made before the beginning semester, and the topics taken up in each subject are assigned to this or that week throughout the term. The teacher knows then just what progress he must make each week in order to get over the whole amount of work. The outline is approved by the local inspector or the principal of the school, and it is always kept in the classroom for reference. The outline course of study is made sometimes by the city school superintendent or a group of teachers. As a rule, however, the class teacher proposes it and is allowed quite a good deal of liberty in the choice of topics and in regard to the amount of time spent upon any given group of topics.

The teacher must also keep a report of progress made in each subject. This report is kept in a separate book called the *Lehrbericht*, in which the teacher notes the topics taught and disposed of, as well as the progress of the pupils. The value of this report is not very great, outside of the fact that it must be made and that it keeps the teacher up to schedule. As far as we have examined such reports the most common note made in these books is "completed." Its form is as follows:

	GERMAN	HISTORY	RELIGION	ETC.
First Week . . . . .	Completed	Not completed	Completed	Etc.
Second Week . . . . .	Completed	Not completed	Completed	Etc.
Third Week . . . . .	Completed	Not completed	Completed	Etc.

The weekly schedule (*Stundenplan* or *Lektionsplan*) shows the arrangement of the lessons for a week, the number of hours devoted to each subject, the days on which these lessons come, and the teacher who is to give each lesson. In large schools, that is, in schools of several grades,

there is a schedule for the whole school, and in each classroom there is a weekly schedule for that grade. These schedules are followed most diligently. As a rule, religion comes first in the morning, and the other subjects which require a great amount of mental exertion are put as early in the day as possible. Subjects like drawing and music are placed at the end of the morning session or in the afternoon.

Such is the general organization of subject matter, which in a large measure determines the methods to be employed.

**Conclusion** The aim of the elementary school is probably of the greatest value to the German educator. Method is placed above subject matter, for it is the basic principle of German life, not how much is done, but how and how well it is done.

## CHAPTER XIV

### GENERAL METHODS IN GERMAN ELEMENTARY SCHOOLS

It is very difficult to make the statement that a certain subject is taught in such and such a way in the Prussian or German elementary schools, because there is a great deal of liberty allowed the teachers in the matter of method, and because there is a great diversity of method in the different states of the empire. Remarks made in the following pages concerning methods in the various subjects of instruction are based on the observation of over six hundred classes in *Volksschulen* in cities and country districts scattered over the whole of Germany.

The teaching in the *Volksschule* is by the oral method, which means that there is comparatively little written work or reading done by the pupils, but that the chief source of in- Oral  
Methodformation is the teacher, who presents the subject matter in the form of carefully prepared talks or lectures. The children listen very carefully to what the teacher says, and repeat it after the teacher has concluded. This method makes great demands upon the teacher physically and mentally. First it requires a large amount of energy to talk the greater part of four or five hours every day, and second, the teacher must prepare the lesson with extreme care in order to be able to present it to the children in a clear and interesting manner. The American visitor must truly wonder at the ability almost invariably shown by the German teachers in the presentation and delivery of their material. The manner of speech is slow, deliberate, but full of animation and life, and, as a rule, the teacher awakens

and holds the attention of the children. The children must also expend great amounts of energy in paying close attention to the subject in hand, for three, or four, or five periods in succession, and one is often led to believe the attention given on the part of the children is a physical rather than a mental attitude.

Sometimes a teacher talks for twenty or twenty-five minutes without interruption and then he stops and begins to question

the children in regard to what he has said. This, however, cannot be said to be the mode of procedure generally in use. The general form of recitation in

Review subjects which admit of the oral method, such as history, literature, religion, science, and geography, is the following: First of all comes the review of the previous lesson or lessons for a few minutes, generally ten or fifteen. In this part of the lesson the teacher calls upon some pupil to summarize or repeat that which the latter has learned about a given subject or topic. The German teacher is not satisfied just because a child knows a thing to-day, but makes him repeat it to-morrow and the next day. *Wiederholen* (repeat) is the word most commonly heard in the German school. This review is not necessarily connected with the lesson of the day, although it is in the majority of cases. The review is not always limited to fifteen minutes, but frequently takes thirty and sometimes forty minutes. This continual review of old work is the most powerful and effective means of compelling the child to know what he is supposed and required to know. Often the teacher will have three or four children give the review work, and the recitation of each child will be practically the same, word for word, as the recitation of the others. This forces the conclusion that the review is a matter of memory rather than repetition of something which the child has thought about and assimilated. But in spite of the memorization or because of it, the review accomplishes its work, the acquirement of certain facts. Long periods

of review at the end of the term are not so common in Germany as in America, obviously because this work is carried on from day to day.

The next part of the lesson is the advance work. Ordinarily the teacher says, "The work for to-day is such and such a topic." The superscription is, for example, "The preparation <sup>Advance</sup> of the ground for sowing." This short sentence is <sup>Work</sup> called the *Überschrift*, and is what we call the topic heading. A lesson will be put under four or five such sentence headings in order to aid the child in grasping and memorizing what will be said. Invariably the teacher asks the children after announcing the heading to repeat the topic heading, and he requires that it be repeated four or five times, so that the children will know what he is going to talk about at least. Then the teacher talks five or six minutes about this topic. It is from these little talks or lectures that the child gets its new material, and not from books as in American schools. These talks are short, clear, concise in form, well delivered, and above all, distinctly delivered. As soon as the teacher has finished his remarks, he begins to ask questions covering the subject matter of the topic in hand.

The procedure which follows is one of the most interesting and at the same time one of the most vital points in the whole educational process of the German schools. The first question is generally, "What is the heading (*Überschrift*)?" The next step is either the request to relate or *repeat* what has been said, or the content of the teacher's remarks is obtained question by question. The first method allows the child more liberty and affords him a better chance for some independent work. The second method, that of direct question and answer, is a purely mechanical process, the question of the teacher generally being turned about by the pupil and made over into an answer of some sort or other.

The first method is very much like methods applied in America, with the difference that the children in America get the material which they are to recite upon from a text-book, while the German children depend upon the teacher. Some teachers allow the children to use their own words in reproducing the subject matter just presented. Other teachers insist, either purposely or unknowingly, upon the children repeating verbatim what the former have said. It is natural and easiest for the children to use the words which the teacher has used. Some children show an almost marvelous ability in memorizing, and if they hesitate, they need only a single word supplied by the teacher to enable them to go ahead with the recitation.

The commonest form of aid given the children in the memorization of the subject matter is the first four or five words of the sentence which the child is trying to recall. Some teachers give a great deal of such aid, others who do not insist on too accurate memorization give less of such help. Not merely one pupil is asked to recite, but several, one after the other, no matter whether the first recitation was good or bad. It is exactly as if in an American school a boy were called upon to tell how corn is planted, and as soon as he had finished one were to ask four or five more boys to tell the same thing and in practically the same words. It is true, that so much repetition of the same recitation is not always the case, but it is all too frequent. However, it accomplishes what the teacher desires. There are a certain number of facts which the children must learn and they learn them by memorizing them. When children acquire these facts from text-books, they do not stick closely to the text in recitation. In fact, they cannot remember the words of the book so well, and are forced to formulate the thoughts in their own language, but when they have just heard the words from the mouth of the teacher, almost involuntarily they repeat what they have heard without thinking seriously of the content.

The second method is that of question and answer. The Minister of Education in 1908 wrote as follows:<sup>1</sup> "The method of instruction develops too much into the form of mere question and answer. More time is to be allowed to the self-activity and independent work of the children. The questioning too often aims at an enlargement of the question by particular words, or deals with what is perfectly obvious. The questions are too easy and awaken the interest of the pupils to too small a degree. It is necessary to make greater claims upon the thinking and power of judgment of the pupils." Teachers who employ the question method in order to obtain the repetition of what they have presented to the children run the risk of falling into the habit of formal question and answer. This is one of the greatest faults of the German elementary school teacher. After he has presented the subject matter he begins to question for the content, sentence by sentence. Frequently he is not satisfied unless the child repeats the exact words which the teacher has used. The great trouble is that the question is too easy and betrays the answer in its own form. The commonest type of question might be called the memory question. The judgment question is a rarity in the average recitation. With some teachers the judgment question is much more frequent and especially in such subjects as physics, chemistry, geography, and botany. But we can safely say that in going into German *Volksschulen* at random eight questions out of ten will be purely memory questions, the others falling in other categories. We counted five hundred questions in classes taken at random and the results gave four hundred and seventeen memory questions as against eighty-three of all other kinds.

When the children seem to have learned the main things under the first topic heading, the teacher continues his remarks under the second heading, third heading, and so on, until he has

<sup>1</sup> *Ministerial Erlass vom 31 Januar, 1908, Zentralblatt*, 1908, p. 379.

finished the day's lesson. Each topic is treated just as the first, and at the end the children are asked to repeat the topic headings and sometimes to summarize the whole lesson.

The greatest fault brought about by the methods as described, and these methods are in general use, is the lack of independent thinking and action on the part of the pupil. No allowance is made for the individuality of the children. Memory work is everything. The children are required to memorize so much that little or no time is left during recitation periods for free interchange of thought between teacher and pupils or between one pupil and another. Naturally the child is called upon at times to think for himself, but it is by no means as frequent as it should be. The teachers often say that they have so much material which they have to teach that there is no time left for open and free discussion in class. That does not seem to be the case, however. The course of study is not overcrowded, as the reader will see later on. The lack of time arises because memorization is the slowest known process of acquiring knowledge. The children are called upon for a great amount of memory work in history, religion, geography, literature, music, and science. In arithmetic the memory drill is not noticeable, because the rules are learned by actual application and by practical examples. Teachers frequently say that they try to get their pupils to do independent work, but as long as they use the method of lecturing and repetition, they will find that the children have no opportunity to do and think for themselves.

The causes for the lack of self-activity and independent thinking on the children's part are not far to seek. The subject matter is given to them and is required of them again in much the same form. Pure memorization excludes opportunity for thinking. The second cause is perhaps as great in its importance as the first. It is very, very seldom that a child

**Lack of  
Independent  
Work  
on the Part  
of the  
Pupils**

**Pupil  
Questions**



is allowed to ask a question in regard to the subject under discussion. The teacher looks at the matter from this standpoint: "I have said everything about the subject that the child needs to know. My explanations have been clear. What has the child to inquire about?" Such questions are not absolutely forbidden, but they are not encouraged. One teacher said to me: "Why, that would destroy the discipline, and the regular order of the lesson. One would never get through with the work planned." It must be admitted that the explanations offered by the German teacher in the presentation of the lesson are almost without exception clear and logical. But a child who is thinking and who is interested in the subject will have some questions to ask, or something of his own to offer. I had visited over three hundred classes in the *Volksschulen* in Prussia before I heard a question from a pupil or a request for an explanation of a question which had occurred to him. Since that time I have found one teacher who openly encouraged the children to ask questions and who gave up a part of each lesson to this work. Other teachers have said that they allow their pupils to ask questions, but in the classes which I visited with them I did not hear any. It is also very seldom that a teacher will permit a question during the course of his explanation. There may be more excuse for excluding questions here, but there is none for bringing children into such a condition that they do not want to ask questions. The German elementary teacher has the field of pupil-questions yet to develop, and when he does, he will have taken the first great step toward developing self-activity and independence in his pupils. The German school child knows a great deal, for it has been poured into him, just as water is poured into a jug, but he does not think for himself or act for himself. He is non-independent. His individuality has been left undeveloped.

The ordinary lesson in the *Volksschule* is pedagogically Her-

bartian. The different steps of the teaching process may be indicated by the preparation, presentation, comparison, generalization, and application. Of course, one or more of these steps may be omitted or two steps may be combined, as is frequently the case.

Pedagogical  
Form of the  
Recitation

It is very seldom that one hears a German teacher present a lesson which is not well prepared, well organized, and logical in its progress. This is due largely to the training of the normal schools, which in Germany are institutions to teach the young men and women how to teach, how to present the subject, how to select the relatively important, and neglect the less valuable, as well as academic institutions where more information is obtained.

Another great help to teachers in Germany is the lesson plans (*Präparationen*), which are obtainable for almost every topic in every subject taught in the *Volksschule*. Some of these lesson plans are very fully developed, even the questions and answers being given. Of course, no teacher could use such a lesson plan verbatim in the school, but the outline and form of the lesson can be of very great help to him. The lesson *preparations* furnish to teachers the subject matter of the lesson as well as the form in which to present it. To what extent these forms are used is impossible to say, but judging from the great number of such publications on the market, there must be a large demand and sale for them. A still more valuable aid to the teacher comes in the form of handbooks and manuals, which are especially prepared for the *Volksschulen*. In every subject a teacher can buy literally hundreds of books which will help him directly in the preparation of his lessons. Since these books are written for elementary teachers, it is not necessary to pick and choose and spend long hours seeking out the proper material to give the children. In the matter of teaching helps, as in many others, the German teachers are much better equipped than are

our teachers. We can account for the excellent general form of the lessons in the *Volksschulen* in no other way than that the importance of form is drilled into the teacher at the normal school, and that his training there is continued and supported afterwards by excellent lesson helps and manuals.

There is still another factor which keeps the German teacher up to a high standard in method and in form of instruction, and that is the strict supervision under which he stands. Every German teacher has a superior somewhere, and, in order to advance, he wants the approval of that superior. It is another very characteristic German trait to do well whatever is at hand and to take pride in it. This, together with the knowledge that his work is always under inspection, keeps his standard of work very high. We may not always think that the standard is of the right kind, but it is the best of the kind to be had.

The matter of school organization also aids the teacher in holding the form of the lesson up to the mark. In the middle and upper sections of schools with several classes, each recitation has forty-five or fifty minutes. This length of time enables the teacher to develop the lesson carefully and completely. In American schools the recitation periods are generally much shorter, especially where each grade is divided into two sections, occupying the same room. The amount of subject matter which a teacher selects for one recitation is little in comparison to lessons assigned in America. This is another factor which enables the German teacher to finish in a well-rounded manner the subject under discussion. The conciseness and clearness of the presentation plus the deliberate, well-planned progress of individual lessons makes one feel after hearing a lesson that a good solid brick has been laid securely and well in the educational structure.

Text-books are used very little in the *Volksschule*. This, of course, necessitates a method not employed in our elementary

schools. For example, in history the children are not assigned so many pages to be read at home. The teacher is the text-book, as mentioned before, and indeed, a speaking text-book, to which the children listen. Text-books are not used in home study to any considerable degree, but are chiefly used in class for occasional reference. In arithmetic, however, problems for solution at home are usually taken from a problem book, but the book is in our sense of the word not a text-book, in which methods of solution and explanations are given, as a substitute for the teacher. German school children know very little about books and how to acquire information from them. They are, in comparison with our children, poor readers, chiefly because books do not mean the same to them that they do to American children. I have seen little reference work at all done in the *Volksschulen*, that is, I have seldom heard children requested to read books supplementary to their regular work in class. In reading, the text-books are much the same as in our schools. Supplementary readers are seldom seen. Some schools have libraries, but they are very little used. In the other subjects, such as history, geography, science, etc., there are no text-books, but a reader for all these subjects together. The children are referred to this book at times after the topic has been discussed in class. Naturally, without text-books the children do very little work at home. They have some written work occasionally and generally problems for arithmetic. It is a safe estimate that the average German school child spends little more than half an hour in home work. In school, however, the child is at work from the time school begins until it ends.<sup>1</sup> Commonly in America the child has study periods scattered throughout the day. Not so with the German child in city schools. One subject follows right upon the heels of another until the day's work is done.

<sup>1</sup> This is true only where one teacher has one class.

And it must be so. The teacher, in view of the lack of a text-book, must furnish the material for the children to learn, and then must find out if they have learned it. Consequently there is neither time nor need for study periods. There is, however, little doubt that good text-books would relieve the German teacher of a great deal of work, which the children could obtain as well through a text-book as through the teacher. Time thus gained could be used in giving the children more opportunity for independent discussion and work in the recitation period, or the teacher could introduce new and interesting sidelights on the regular routine work. Too much text-book and too little teacher is not good, but the reverse is not much better.

The children in the German elementary schools have much less written work to do than our children. The form of that which they do is excellent, the content leaves much <sup>Written</sup> to be desired. Dictations for the sake of form, spell- <sup>Work</sup> ing, and the like are very frequent, but short. Original compositions are written once every two weeks at home, while prepared compositions are required at least once a week. A prepared composition is one for which the subject has been talked over in school, the form is prescribed, and it amounts generally to little more than a spelling and writing exercise, for the thinking has been done in advance by the teacher. The original compositions prepared independently at home are generally in connection with the work at school, and the subject of the composition is frequently determined by the teacher. Another form of written work in some schools is the daily essay (*Niederschrift*). It consists merely of a few sentences written in class at the close of a recitation, generally summarizing the main points of the lesson, or treating some one topic. Five or ten minutes are given to such work. These several forms of composition work are discussed in the chapter dealing with German instruction. From the lowest grade to the highest in school

written work is always handed in in notebooks, written in ink. The teacher and the children as well are relieved of great burdens by the small amount of written work. The children do not write easily or fluently, because of lack of practice, and because the work, such as is done, is too formally prepared. The Minister of Education recognized that the written work was faulty and touched on the subject in his order of January 31, 1908. He is quoted at some length because this order is one of the few issued since 1872 dealing with methods:

For work in written expression the essays, comparatively few in number, which are frequently prepared without a purpose, are not sufficient, but there must be frequent, and if possible, daily written exercises in the form of short essays (*Niederschriften*). This exercise begins in the lowest grades with the composition of short sentences and develops more and more in the upper classes into short essays, which are finally to be written without any special preparation, and whose content is to be taken out of the various subjects treated, and also from the experience and observation of the children. Such written exercises are to be prepared not only in the German instruction, but also in other branches, namely, the *Realien*. Corrections, as a rule, are to be made by the pupils in the class.

In regard to the real compositions, the subjects are to be chosen from the subject matter already treated, and from the experiences and observations of the children. Real life conditions are to be considered in letters and in business correspondence. Topics are to be excluded which lie far from the consciousness of the child, which go far out beyond their power of comprehension and expression, and which would only lead to verbosity, which do not express what the children themselves have thought and felt. In working out the composition a drill on one definite, set conception of the subject is to be avoided. Even if the chief thoughts and the outline are worked out in common by the teacher and the pupils, the latter are to be allowed the greatest possible liberty in particulars in the form of expression. The preparation for these exercises can disappear more and more in the upper sections. These exercises are not to be corrected by the teacher, for in this case the corrected copy would only have the value of a writing lesson. The compositions can be read aloud by individual children, then commented on by the teacher and corrected by the pupils themselves in the original form. Then the teacher looks over the compositions as cor-

rected by the pupils. On the return of the compositions mistakes which occur rather frequently are to be explained, just as in the case of the daily written exercises (*Niederschriften*).

These recommendations of the Minister show most clearly where the weaknesses of the written work lie. The children have not been and are not yet allowed freedom enough in the selection and preparation of their material and in the execution of their own ideas.

The German teacher makes concrete the ideas which he is trying to present. The child learns by eye as well as by ear. German schools are provided richly with maps, charts, **Teaching** models, machines, pictures, and other material. **Material** There is never an overabundance of such material, but there is rarely a topic discussed in class without there being some sort of a representation of it before the eyes of the children. In religion there are maps and pictures, and in history the same with charts in addition. Maps and globes are almost without number in geography, while in the sciences there is always plenty of physical and chemical apparatus, and models of animals and birds, either artificial or natural. As a result of so much care and expenditure in this respect, the child has ever before the eye something concrete with which he can tie up what the teacher is saying. The average teacher, however, just in this connection, misses his best opportunity to let his pupils develop their self-activity. Instead of asking the questions, "What do you see here?" "What do you know about the object?" "What have your experiences been with such things?" and so on, he generally tells the children all about the object, to be sure, very fully and accurately, and then the children are asked to repeat what they have been told.

We would not be stating the exact state of affairs, if we closed our remarks on the general class procedure here. What has been said applies to the average recitation. The reader must,

however, withhold judgment of German teaching methods, until the chapters on the several subjects have been read. Above all else, the method must be finally judged in light of the aim of the entire process.

There is a large number of teachers and principals, the leaders in school thought, who do not conduct their classes in the manner described above. Some features are the same. One may say that all steps mentioned are present in the recitations of these more advanced teachers, but there are other more vital elements in addition. These teachers make allowance for the individuality of their pupils, and they make provision in their method for individuality. These teachers recognize the fact that children are by nature active workers and not merely jugs into which something may be poured. They recognize that these children want to *do* things. A concrete example will serve to show just how these teachers let the children develop and employ their thinking capacities instead of forcing them to memorize facts. Naturally these better teachers do not all employ the same methods.

This lesson given in S—— was about bees. The teacher had pictures of bees, beehives, and honey. Then she had a model of a honeycomb, showing how the bees stored the product of their labors. The first question, after they had all looked at the pictures and models, was: "What do you know about bees? Tell me anything you know if you think it is important enough." The children, though of only nine or ten years of age, began to pour out their information, and when they had finished, every child in the room knew how the hives were made, where the honey came from, all about the queen, swarming and its causes, and many other details, some amusing, but all real to the children. Next the teacher said, "Have you any questions to ask?" The questions were not long in coming: "Where do little bees come from?" "Why doesn't the honey run out of the comb?"



"How many bees are there in a hive?" and without exception these questions were real and to the point. Some of the questions the teacher answered, but the children were generally given a chance first to answer their fellow's questions, and their explanations often sufficed. When this was all over, there wasn't much left for the teacher to say, for they had all talked about it together. There were points which needed clearing up and this the teacher did. At the close a child was asked to summarize what had been learned. There was no rote work or memory drill, but these children *knew* about bees. Their capacity for bee observation had been wonderfully developed. Their attitude toward the subject was, "I know this about the bee, but what is that?" Their minds were inquiring and open. The bell rang and there was a chorus of "Oh's" in disappointment.

The next period following the same class was very different. Another teacher was there, a teacher of the method described first. The children had acquired the inquisitive attitude of mind and began to ask questions about the whys and wherefores of things. The teacher silenced them and began to drill in the facts cut out for the week's work. The bell rang in due time amid rejoicing.

The reader, however, will get a much clearer idea of methods actually employed by reading the stenographic reports of lessons given in following chapters dealing with the various subjects of the *Volksschule*. The lessons given are as Conclusion nearly typical of the general practice as we have been able to secure. The danger is always present that the classes observed were not typical, but owing to the comparatively large number of classes visited, we believe that the lessons selected from the whole group of reports are rather representative of German methods.

## CHAPTER XV

### RELIGION

“AMONG all the subjects of instruction in the German elementary school, religion, without doubt, occupies the most important place.” A statement to this effect is found in the work of practically every German school man writing on the relative values of the different branches of study. It seems much safer to say that religion is one of the three most important subjects, German and history being the other two. It may be difficult for Americans to understand why so much time, about an eighth of the total, is given to this subject. Religion, according to German school men, has a twofold purpose to fulfill. First, and of lesser importance, it must acquaint the children with the faith of their fathers. Second, and of the higher importance, it must teach the children their duties to God, the *king*, the *Fatherland*, and their fellow men. To an impartial observer who has seen a large number of lessons in religion taught in the German schools, the real aim of all the instruction in religion is to justify the doctrine of the divine right of kings in the hearts and minds of the people. Frequently we have heard teachers stating the doctrine that there is a very close relationship between piety and patriotism, between obedience to God and obedience to the temporal king.

In one sense of the word religion is the oldest subject of instruction in the German *Volksschule*. From the period of the earliest beginnings of the *Volksschule*, when religion occupied practically the whole time of instruction, there has been a gradual decrease in the amount of time allotted to it, but even to-day it occupies a comparatively large place in the curriculum. Under

the Hohenzollern kings there has been a very marked effort to make the people religious, and develop in them that sort of piety which causes a people to sacrifice everything for God, king, and the Fatherland. Even Frederick the Great, disbeliever though he was, insisted that his people study religion in order that they would be obedient and subservient to the authorities over them. At the present time the study of religion has produced in the mind of the average German the idea that God, king, and country are equally sacred, inviolable, and coexistent.

No German child is excused from religious instruction. If the child is a Protestant, he attends a Protestant school; if a Catholic, he attends a Catholic school; and if a Jew, Sectarian Schools a school of that faith, if there be one. In case the child has no religion at all, he is not excused, but must study the lessons in religion of the school which he attends. Under no circumstances is it left to the parent's discretion as to whether his child shall or shall not receive religious training. All that a parent can do is to choose from the types of instruction offered. It very often occurs that a community is predominantly of one confession, and contains only a few children of other faiths. According to the German school law no child is required to receive religious instruction except from a teacher of his own confession. Accordingly, a Catholic child in a predominantly Protestant community does not receive his instruction in religion in the regular school, but receives it from his own clergyman at some definite time. Such a child must obtain a certificate of attendance from his clergyman and present it at his own school.

In large cities where all religious denominations are represented in large numbers, it is comparatively easy to organize Sectarian Schools in Cities and in the Country Jewish *Volksschulen*, for as a rule Jewish children attend the higher schools, or are so few in number that they prefer to take their religious instruction with the rabbi. In

rural districts the matter is not so easily regulated. It is the custom in districts which are of differing religious beliefs to establish a school of one faith in one village and of the other faith in the neighboring village. Of course, this necessitates children walking quite long distances sometimes, but in reality it causes no serious difficulties, for villages in Germany are never very far apart.

In Prussia and in practically all German states religious instruction in the schools is supervised by the church. In former times the clergy had control of the teaching of all subjects in the *Volksschulen*, but all branches of the curriculum, save religion, have been removed now from their supervision. It is with a death-grip that the church holds on to this last stronghold. Several times a year the pastor or priest of the district visits the schools and sees if religion is being taught in an orthodox manner. As a rule, the pastor inspects the school about Easter time and visits each class. After he has made the round of the rooms, he meets the teachers in conference and makes his suggestions. The pastor has real power of recommendation and while visiting may even request the teacher to turn over the class to him. It is very seldom, however, that this is done. We recall such an occasion in a large city school in Prussia, which brought on quite a lot of discussion among the teachers as to the pastor's right to do more than observe what was being done. Some of the teachers even went so far as to tell the pastor in the conference that he had exceeded his rights. The principal of the school immediately read a passage from the Prussian constitution which runs:<sup>1</sup> "The churches control the religious instruction in the schools." After the meeting was over the principal of the school explained to the teachers in private in no uncertain terms just who their superiors were in matters pertaining to religion.

<sup>1</sup> *Verfassungsurkunde*, Art. 24, Heinze, *Im Amt*, p. 4.

The socialists in Germany oppose religious instruction in the schools for the reason that they see it is the foundation of monarchialism and imperialism. In some cities where the socialists are particularly strong they have made attempts to remove religion from the elementary curriculum, although as yet they have not been successful in any case. Teachers have frequently told me that one of the hardest things to combat in the upper grades of schools is growing disbelief on the part of the children, and that this disbelief is occasioned by socialistic parents who tell their children that the religion taught in the school is all a humbug and that they need pay no attention to it. This was true particularly in the great industrial centers of western Germany, near Essen, Barmen, Dortmund, Elberfeld, and Düsseldorf. Every effort is made by the government to combat the influence of socialism, and teachers are required to preach openly against its malicious(?) influences.

Socialists  
and Religion  
in the  
Schools

If in large cities there are about an equal number of Protestant and Catholic schools, it is the custom to have two superintendents (*Stadtschulräte*), one for the Protestant schools and one for the Catholic schools. There is no especial advantage in this except that teachers and pupils liked to be supervised by one of their own confession.

Administra-  
tion of  
Sectarian  
Schools

There are Protestant and Catholic editions of practically all elementary school text-books. For example, there are Protestant and Catholic editions of school histories, readers, science readers, and religious texts, as well as some of the other texts. The books differ in their treatment of certain phases of history, religion, and literature. It is necessary to have these sectarian texts on account of the great divergence of sympathies existing among the different classes of people.

Sectarian  
Text-books

Religious instruction consists of the catechism, Biblical history, church history, and the liturgy, which consists of church

ritual, prayers, church music, calendar, and pericopes. As a rule special hours are assigned only to Biblical history and the catechism, while the other phases of religious instruction are given in connection with them. Biblical history is used for illustration of the doctrines laid down in the catechism, it furnishes a great many proofs of the truth of the doctrines found in the catechism, it gives concrete form to these doctrines.

Four hours a week in religion are given throughout the elementary school course, except in the last year when the number is decreased to three, because of the extra time which the children must spend in preparation for confirmation. (See below.) In addition to this the children are urged to go to church on Sunday, but as a rule the children seem satisfied with the amount of spiritual food they receive in the school.

The following is a brief outline of the course of study for a seven-grade system:

Class 7. Fourteen Bible stories, eight passages from the Bible, five stanzas of songs, five commandments, and three prayers. The following are some of the stories: Joseph and His Brethren, Joseph Is Sold into Egypt, Joseph in Prison, Jacob Goes to Egypt, The Birth of Jesus, The Wise Men from the East, The Twelve-year-old Jesus in the Temple, Jesus and the Children.

Class 6. Fourteen Bible stories, seven passages, eight stanzas of song, three commandments, and one prayer. The Bible stories include: Abraham and Lot, Isaac's Birth and Sacrifice, Jacob and Esau, The Feeding of the Five Thousand, Jairus' Daughter, Jesus' Crucifixion and Death, and The Resurrection of Jesus.

Class 5. Nineteen Bible stories, eleven passages, four stanzas of songs, the second commandment, and the second article of the catechism without explanation. The stories include: David and Goliath, Moses' Birth, Absalom, The Prodigal Son, The Good Samaritan, Jesus before Pilate and Herod, and Jesus' Ascension.

Class 4. Twenty-one new stories, twenty-one passages, twenty-three stanzas of songs, explanation of the first section of the confession and the first and third articles of the catechism.

Class 3. Twenty-nine new stories, thirty-nine passages, eighteen stanzas of songs, the explanation of the three articles, and the Twenty-third Psalm.

Class 2. Memory material, twenty-seven passages, thirty stanzas of songs, the Ninetieth Psalm, 1-12, One Hundred and Thirtieth Psalm, the books of the Bible, the explanation of the third section of the confession, and the text of the fourth and fifth articles of the catechism. Bible reading: The Psalms and the Life of Jesus. The pericopes.

Class 1. Twenty-one passages, twenty-five stanzas of church songs, the first and fourth sections of the confession. First and One Hundred and Twenty-first Psalm. Bible reading: Old Testament, the Psalms and about the prophets of Israel. New Testament, Christ's life and teachings. Church history covering the persecution of the Christians, Augustine, Boniface, Huss, the Reformation, Luther, Melancthon, Zwingli, Calvin, and Francke. Home and foreign missions. Treatment of all parts of the catechism. That is to be considered especially which has meaning for the social and religious life of the present: Superstition, materialism, the oath, observance of the Sabbath, attitude shown toward gentlemen, servants, superiors and rulers, modesty in word and deed, what is mine and yours, honesty in business, contentment, gratitude, social-political legislation, charitable institutions.

As in all other subjects of instruction, there is an enormous amount of material in religion which the children are required to memorize. There are one hundred and one Bible **Memory** stories that the children must memorize, one hundred **Work** and thirty-five passages from the Bible, one hundred and thirteen songs, as well as all of the catechism, liturgy, and pericopes. In addition to this the church and apostolic history is practically all memory work. There are, to be sure, many lessons given to it, but at the same time it makes heavy demands upon the children.

No text-book is used in religion in the first three years in the majority of schools. In the intermediate and upper sections the children generally have a Bible reader (*biblisches Lesebuch*), which contains the catechism, liturgy, ritual, **Text-books** hymns, church history, Bible stories, which are written in Bibli-

cal style, and extracts from the Bible, or a paraphrase of certain parts of it. The Bible itself is not always in the hands of the pupils, but it is usually in their hands in the upper classes. Sometimes the catechism is in a separate book and frequently the church hymns are bound by themselves.

Every school, whether in the city or in the country, is required to have a map of Palestine as part of its equipment. In

**Equipment** actual practice most schools have several maps of the Holy Land and of the countries mentioned in the Bible. Besides, it is customary to have pictures illustrative of the sacred stories which are presented to the children. One most frequently finds pictures representing Christ in the Temple, Christ's nativity, the Crucifixion, and other of the more striking and dramatic incidents in Bible story.

Although the religious instruction consists of Bible stories, catechism, liturgy, songs, and other elements, the work is closely correlated. In the lower section, that is, the first

**Bible Stories and History** three years, a large part of the work consists of Bible stories. Stories, like those of Joseph and of Jesus, are selected to fit the ability of children. The general method of teaching such stories is the same as that used in teaching fables and fairy tales in the corresponding grades. The teacher tells the story in a lively animated manner, and all the while is careful to keep his language extremely simple and clear. Generally he uses a sort of paraphrase of the Biblical story. After a few sentences of the story have been related, one or two pupils are required to repeat the story in practically the words of the teacher. In fact, all the stories are learned in this manner throughout the grades. The children seem to enjoy learning Bible stories and delight much more in telling them. In the upper grades the children often go over in their Bible readers the stories they have memorized and use them as a reading lesson. The memorization is very efficiently done and years after the children have



left school they are able to repeat a long list of stories that they have learned in the religion class at school. We have talked frequently with young men and women who have finished the *Volksschule* and on being asked to repeat this or that Bible story were able to give it almost word for word. In making a test of this point, a housemaid was given a list of Bible stories in order to see how many of them she could repeat. She was able to recite every one of them with almost no hesitation.

Catechism is begun in the very earliest grades and is made increasingly difficult as the work progresses. All of this work is purely of memoriter character and the children must know absolutely every word of it. Naturally, there <sup>Catechism</sup> is some explanation of the meaning of the doctrines and teachings of the church, but this comes in the upper grades after a large part has already been committed to memory. Practical application is made of the truths contained in the catechism, particularly in the last two years of school. Such questions as superstition, materialism, perjury, honesty, and the like are discussed, and the teachers strive hard to impress the children with the cardinal truths of life. It is also worthy of note in connection with the teaching of the catechism that the relation of the citizen to his God and his king is especially stressed. Perhaps more is made of this point than of any other.

In all the grades of the school, parts of the liturgy, that is, prayers, responses, masses, pericopes, church calendar, and hymns, are given, although the larger part of the <sup>Liturgy</sup> liturgy is reserved for the last years in school, just previous to the time when the children are supposed to become full-fledged members of the church. There is an enormous amount of material to be learned. First of all, there is a great number of songs, the words and meaning of which are learned in the religion hour, but which are generally sung in the music period. The songs which are learned are those in most common use in

the churches of the community. The whole of one hymn is rarely ever learned at one time, and sometimes all the stanzas of some hymns are never learned. As far as our observation went the children find a great deal of real joy in singing the hymns, although they display a far greater readiness in singing secular songs.

Learning the church calendar and the pericopes also lays quite a serious claim upon the memory of the children. In this work they are required to commit to memory the scriptural assignments for each church service during the whole year.

In addition to all this there are a number of prayers, benedictions, invocations, and the like which the pupils must commit to memory.

The children receive a great deal of benefit from the study of church history, for within the scope of this phase of religious instruction is included the history of the Jews, the Romans, and the Germans with regard to their relationship to Christianity. Naturally the history of none of these peoples is treated very intensively, but generally the teachers take great pains to describe the development of the races which have been vitally touched by Christianity. The method in presentation of the material is the same as that in the regular history period. The teacher relates the subject matter to the pupils and explains its meaning to them. After this has been done the children merely tell what they have learned, but which fortunately they are not forced to commit to memory.

The avowed purpose of the religious instruction demands that some sort of moral application be made. By application is not

meant merely a general moralization, but an application of the principles which have been developed in the study of historical characters to the Christian life of the children, and to their circle of duties and responsibilities, to their errors, temptations, and trials.

**Church  
History**

**Application  
of Bible  
Stories and  
History**

Biblical geography is the description and discussion of the places and regions connected with the Bible narrative. There are no special hours set aside for this work, but it is treated incidentally. Particular attention is given to the geography of Palestine, while Greece, Rome, Egypt, and Germany are also treated. Of course, the political geography dealt with is that of Bible times, and is not of very much value to the children at present. The physical phase of the subject, however, is handled rather fully and can be rather closely correlated with the regular work in geography.

The religious instruction in the German elementary school aims to develop moral principles for the everyday life of the children. The children are acquainted with these principles through precept rather than through practice. The children receive instruction in moral principles rather than training in their application. The German child has very few opportunities to exercise his moral judgment in school. The routine of the school robs him of that chance. In the *Volksschulen* there are no organizations for the children which are so fruitful in offering occasions to the children to decide between right and wrong. Ordinarily the teacher states the moral lessons to be drawn from the Bible lessons or stories. Frequently, it is done in the following fashion: "Why did Joseph's brothers cast him into the pit?" "They cast him into the pit because they were jealous of him." "What should we not be?" "We should not be jealous." This process, no doubt, acquaints the child with the moral ideas, but it is questionable if it has a very great influence upon the conduct of the children.

Moral  
Training vs.  
Moral In-  
struction

German school children are not without training and firm grounding in morals. It is not gotten, however, from the religious instruction in school but from training at home and in the community. The example of the teacher is also a very powerful

influence in shaping the characters of the children. German children are honest, courteous, punctual, conscientious, and thrifty. Their training and rearing at home is the most important factor in their moral education. Thrift they learn by example and by precept. In many places the pupils are encouraged in saving by the establishment of school savings banks. One of the greatest moral virtues of all German children is their respect for the law. They acquire this respect from the attitude of their parents and the entire citizenship toward the law. They know that they *must* have respect for the law, for they know its operation is as inevitable as the rising of the sun.

Despite the great amount of religion taught in the schools the Prussian people are not religious. The attitude of the majority

**Effects of  
Religious  
Instruction**

in religious matters is not that of antagonism toward the church, but rather that of the utmost indifference.

In the Catholic sections of Prussia and in southern Germany the people are much more devout than in those sections which are predominately Protestant. In a number of large cities in Prussia it has been found that about one per cent of the population attends a church service once a week. Practically every one belongs to a church, but that is about as far as it goes. The church in Germany is not the social institution that it is in America. One very rarely hears religion and the church and its activities spoken of. The church is a part of the order of things in about the same sense as the fire department is. It is state supported, state managed, and state controlled in a very large measure. It can operate without the individual efforts of the citizens, hence no one bothers himself about it.

The commercialization of Germany is one of the large contributing factors in the growth of religious indifference. Germany is the most commercial, most money-mad nation in

the world to-day. It is often said that the American sacrifices everything for the dollar. The German sacrifices everything for the *pfennig*. The god of the German is force, and his religion is Germanism. The German state is their all. In consequence the piety and reverence of the old German is buried deep beneath the onrushing current of industrialism, materialism, and their passion for wealth and world power. Only a national disaster can make the German pious and reverent as of old. Germany has enormous wealth, and with its sudden acquisition has come an alarming indulgence in luxury, vice, and pleasure. *Nachtleben* (night life) has the nation in its grip, and this type of life is not limited to Berlin, but is found in the capital of every province, and in small cities, and in villages. When any nation begins to make day out of night, it has begun to undermine its own foundations.

It is a sad commentary on German moral life, as well as upon the effect of religious instruction in the schools, to know that one hundred and seventeen out of every one thousand births are illegitimate. Women openly employed in vice are not included in this number. From these figures it is very evident that sex immorality claims a very high percentage of the people. This is another cause of the decay of the spirit of piety and reverence.

Observation of the German people at work and at play leads us to the opinion that the religious instruction of the schools has little effect upon their moral life and an ever decreasing effect upon their religious life. Every virtue is taught the children, but the average German man indulges himself in his early years either in drunkenness, licentiousness, or selfishness. He is not charitable. His positive virtues are honesty and thrift. There can be no more positive proof than Germany that "Morality cannot be taught."

Causes of  
Religious  
Indifference

## RELIGION

## II (SIXTH-YEAR) CLASS. GIRLS

*Teacher:* What are the chief religions of the world?

*Pupil:* The chief religions of the world are the Christian, which exists in Europe, America, and many other parts of the world; the Jewish, which is scattered over the face of the earth; the Mohammedan religion, which exists chiefly in Turkey, Persia, and in northern Africa; the Buddhist religion, which exists in Japan and India; and the heathen religion.

*Teacher:* Repeat that.

*Pupil:* The chief religions of the earth are the Christian, existing in Europe, America, and many other parts of the world; the Jewish religion; the Mohammedan religion, which exists in Turkey, Persia, and northern Africa; the Buddhist religion in Japan and India; the heathen . . .

*Teacher:* In what land near Japan is the Buddhist religion strong?

*Pupil:* In China; and the heathen religion in all parts of the world.

*Teacher:* What religion do we honor?

*Pupil:* The Christian religion.

*Teacher:* Where did the Christian religion get its name?

*Pupil:* It received its name from Christ.

*Teacher:* What did Christ announce to mankind?

*Pupil:* Christ proclaimed that he was the Son of God.

*Pupil:* He proclaimed also that we should believe in Him.

*Pupil:* He proclaimed that we should receive the kingdom of Heaven.

*Teacher:* We say God revealed himself to mankind. To whom did God reveal himself?

*Pupil:* God revealed himself to mankind.

*Teacher:* Through whom did God reveal himself?

*Pupil:* God revealed himself through Jesus Christ.

*Teacher:* Had God ever revealed himself before the time of Christ?

*Pupil:* He revealed himself to the Israelites.

*Teacher:* By what man did he reveal himself?

*Pupil:* God revealed himself through Moses.

*Teacher:* Yes, Moses was God's agent. God revealed himself twice, first through Moses to the Jews, and secondly to *all* men through Christ. How often and to whom did God reveal himself?

*Pupil:* God revealed himself twice, first to the Jews through Moses, and then to men.

*Teacher:* All men.

*Pupil:* And then to *all* men through Christ.

*Teacher:* Where is this revelation?

*Pupil:* It is in the Bible.

*Teacher:* Yes, but God revealed himself not only by writings, but also by speech. What does the word Bible mean? (No replies.) The word Bible . . .

*Pupil:* It means Holy Scripture.

*Teacher:* No, it means *book*. You have other books, though, haven't you? What ones?

*Pupil:* The reader, the arithmetic, the grammar.

*Teacher:* But why call this *the Book*?

*Pupil:* Because it contains the Holy Scripture.

*Pupil:* Because it is important, a special book.

*Teacher:* That is right. It is sometimes called the Book of Books. What is it sometimes called?

*Pupil:* It is called the Book of Books.

*Teacher:* Why is the Bible more important than all other books, than the reader or the grammar?

*Pupil:* It is more important because it was written by Christ.

*Pupil:* Because it contains the Holy Scripture.

*Pupil:* Because it was written by Luther.

*Teacher:* It was not written by Luther, only translated into German by him. This book shows us something special.

*Pupil:* It shows us the way of life.

*Teacher:* That is, the way to God. Therefore it is the most important of all books. The word Bible is a very common one, but still it is a foreign word. It comes from the Latin for book. What else is the Bible called?

*Pupil:* It is called the Holy Scripture.

*Teacher:* Why is it called holy?

*Pupil:* Because God's word is holy.

*Teacher:* What else is in the Bible?

*Pupil:* There are proverbs, parables, history in the Bible.

*Teacher:* What is the content of the Bible?

*Pupil:* The Bible contains the Holy Scriptures.

*Teacher:* Again.

*Pupil:* The Bible contains the Holy Scripture, and proverbs, parables, and history.

## PRUSSIAN ELEMENTARY SCHOOLS

*Teacher:* What kind of history?

*Pupil:* Sacred history.

*Teacher:* Who wrote it?

*Pupil:* The Prophets and Moses wrote it.

*Teacher:* What is the meaning of the word Bible?

*Pupil:* The word Bible means book.

*Teacher:* Why is it called only that?

*Pupil:* Because it is the most important book of all.

*Teacher:* What way does the Bible show us?

*Pupil:* The Bible shows us the way to God.

*Teacher:* It is worth more than all the other books. What other name is given it?

*Pupil:* The Holy Scripture.

*Teacher:* Again.

*Pupil:* It is sometimes called the Holy Scripture. It deals with the revelation of God.

*Teacher:* Why is it an especially important book?

*Pupil:* Because it contains the Holy Scripture.

*Pupil:* It is especially important because it shows the way of life.

*Teacher:* Why is it called the *Holy* Scripture?

*Pupil:* It is called the Holy Scripture because it contains the word of God and it is holy.

*Teacher:* What is the third name sometimes given to the Bible?

*Pupil:* The Word of God.

*Teacher:* That is easy to explain. Why is it called the Word of God?

*Pupil:* Because it contains the words of God.

*Teacher:* Have you read the Bible?

*Pupil:* Yes.

*Teacher:* What language is it written in?

*Pupil:* It is in German.

*Teacher:* Has the Bible always been in German?

*Pupil:* It has been in German since the time of Luther.

*Teacher:* What language was it in before Luther's time?

*Pupil:* Latin.

*Pupil:* And Hebrew.

*Teacher:* Did Christ speak Latin?

*Pupil:* He spoke German.

*Teacher:* No. Now think where he lived. Where was that?

*Pupil:* He lived in Palestine.



*Teacher:* What language did he speak then?

*Pupil:* He spoke Hebrew.

*Teacher:* In the time of Jesus none of the Bible was written and collected as it is now. What language did the prophets and apostles speak?

*Pupil:* They spoke Hebrew.

*Teacher:* Some of them wrote in another language. What language?

*Pupil:* Latin.

*Teacher:* No, Greek. How did that come? (No answer.) At that time Greek was the language of commerce and culture, and it was spoken everywhere. It was a world language. What would have happened if the disciples spoke only Hebrew and the Bible were only in Hebrew?

*Pupil:* Then the religion would have been for the Jews only.

*Teacher:* Yes, and that was not the purpose of Christ's coming. He brought salvation not only to the Jews, but to all men. Therefore a new language had to be used and the part of the Bible written in Greek was the New Testament. What does the word Testament mean?

*Pupil:* It means *Bund* (alliance).

*Teacher:* How many people are needed to form an agreement or covenant?

*Pupil:* Many.

*Teacher:* At least how many?

*Pupil:* At least two.

*Teacher:* Yes, there are many alliances. Your father and mother have formed an alliance; and Germany, Italy and Austria have made an alliance. Who made the alliance in the Bible?

*Pupil:* God and man made an alliance.

*Teacher:* Who was the negotiator of this alliance?

*Pupil:* Jesus Christ.

*Teacher:* What does testament mean?

*Pupil:* Testament means an alliance.

*Teacher:* What conclusion must you draw when you speak of a *new* Testament?

*Pupil:* That there is an *old* Testament.

*Teacher:* With whom did God make the *old* alliance?

*Pupil:* He made the old alliance with the Israelites.

*Teacher:* Who was the negotiator of the old alliance?

*Pupil:* Moses.

*Teacher:* Yes, God made two alliances (or covenants) with Man. The first was between God and mankind and Moses was the negotiator;

and there is a new covenant between God and Man through Jesus Christ. Summarize that.

*Pupil:* God made two covenants with man. He made the first covenant with Man through Moses; and he made the second covenant with Man through Christ.

*Teacher:* What was the language of the Old Testament?

*Pupil:* The Old Testament was in Hebrew.

*Teacher:* What was the language of the Bible which Luther found?

*Pupil:* It was in Latin.

*Teacher:* The Greeks after a long time lost their leadership and a people living to the west of them became their leaders. They lived in the country that is now Italy. They were the Romans. What language did they use?

*Pupil:* Latin.

*Teacher:* The Christian religion was spread over western Europe by Roman priests and all of them spoke Latin, so it became necessary, inasmuch as they preached in Latin, to translate the Bible into Latin. Repeat that.

*Pupil:* The priests who spread the Christian religion in Europe all spoke Latin, so that it was necessary to translate the Greek and Hebrew scriptures into Latin.

*Teacher:* What did we talk about first?

*Pupil:* We talked about the names of the Bible.

*Teacher:* Then what?

*Pupil:* We spoke of the language of the Bible.

*Teacher:* Tell me about that.

*Pupil:* At the time of the Romans, the Bible was in Hebrew. . . .

*Teacher:* In what language was the Old Testament?

*Another Pupil:* The Old Testament . . .

*Teacher:* What is the oldest or first part of the Bible called?

*Pupil:* It is called the Old Testament.

*Teacher:* In what language was the Old Testament written?

*Pupil:* Latin . . .

*Another Pupil:* It was written in Hebrew and the New Testament was in Greek. In later times the Romans spread Christianity, and since they spoke Latin the Bible was translated into that language.

*Teacher:* Luther was not the first who translated the Bible or parts of it into German. Parts had been translated excellently, while other parts had been poorly done. And what was the result of such work?

*Pupil:* Nobody understood it.

*Teacher:* Yes, so Luther translated so that any German could understand it. He translated it from the original because he knew both Hebrew and Greek. Between the backs of this book which I hold in my hand is the story of many centuries. Was the Bible always one book?

*Pupil:* No, it was several separate books at first.

*Teacher:* At the time of Christ they were not in one book. How were they kept?

*Pupil:* They were kept on rolls.

*Teacher:* Yes. At that time book-making was not so highly developed as now. Writing was done on papyrus or on parchment. This paper was made from a plant, the stems were slit open and several stems laid together and beaten and smoothened, and the writing was not done with a steel pen. What did they write with?

*Pupil:* They wrote with a real feather (quill) or with a brush.

*Teacher:* Books were not bound up as they are now, but these parchments were rolled up on sticks and laid on a shelf. The title was written on the outside and a person wishing to read sought out the roll he wanted and read it. What does our school Bible cost?

*Pupil:* It costs from one to two marks.

*Teacher:* Was the Bible always so cheap?

*Pupil:* No.

*Teacher:* It used to be that a man would work his whole life in writing a Bible. He would work for years and years. They were written very carefully and illustrated and embellished, especially the initial letters. Sometimes a Bible would cost two thousand marks (Oh) or more. Why was it that Bibles cost so much then?

*Pupil:* They cost a great deal because there was so much work required in making them.

## CHAPTER XVI

### GERMAN

GERMAN, as a subject of instruction in the *Volksschule*, includes observation work, reading, literature, composition, grammar, spelling, and writing. In glancing over a German elementary course of study it is usual to find all those different branches of language instruction grouped under the general term, German, although the hours for writing and observation instruction are given separately. Clear-cut distinctions between reading and literature, literature and grammar, grammar and spelling, and the like are not made in the German schools as are sometimes made in ours. A German period usually affords some time to several of the subjects included in the conception — German instruction. One very rarely finds a spelling lesson, a grammar lesson, or a reading lesson which takes up the whole of a period marked on the daily program as German. As a rule, part of the time is given to reading, part of the time to grammar or spelling, or the hour is broken up into some other such combination.

**General Regulations of 1872 concerning German Instruction** The General Regulations of 1872 lay the foundation principles of German instruction for the Prussian *Volksschulen*.

The following course in German is for an eight-grade school. It is very similar to any course which one would find in a large city of Prussia. Courses of study for schools with fewer grades would contain the same material, but it would be divided a little differently.

The instruction in German is to bring the children to a complete mastery of the oral and written use of the mother tongue. This end is to be brought about by the use of the primer, reading book, regular grammatical exercises and instruction, independent written exercises of the children, and by object lessons in the lower sections.

I. The primer belongs to the eighth or lowest class. The children learn German script and print and are drilled in phonetic reading of short passages.

The reader is taken up in the seventh class. Latin print is learned. Phonetic reading. Thoughtful reproduction of reading passages is practiced. Exercises in spelling.

The drill of the A B C's appears in the sixth class in addition to the reading and understanding of the passages assigned. In the fifth class regular exercises and the reproduction of narrative passages begin and are continued in the fourth class. In classes two and three this work is broadened by paraphrasing of selections, with special attention to organization of material. In the first class the work is further enlarged by instruction concerning the different kinds of literary composition and the different types of poetry.

II. Grammatical exercises begin with the first year. From the seventh class on, the grammatical work follows a regular order with the aid of a grammar or language book, which divides the material into year's work. From the seventh to third class the subject matter is assigned to five days for ten or fifteen minutes each, but in the two upper classes the grammar work is limited to three days a week, so that a whole hour can be given to it once a week. In this way it is possible to treat grammar in a connected manner in these two classes. So, also, syntax and the most important phenomena of word formation and change of meanings, which are necessary for an understanding of the language, will be able to find a more thorough presentation. In classes seven to one a dictation is given every Saturday. Finally, an exercise consisting of a few sentences from the grammar text is to be given the children in classes seven to two every day as home work. In the seventh and sixth classes this grammar exercise may be interchanged with copying some lines from the reader. The subject matter in grammar is divided among the different classes as follows:

Class 8. Exercises in copying words and short sentences from the board or out of the primer; writing down words and short sentences whose spelling corresponds to their sound; dictation of words copied previously; and sentences composed by the children themselves.

Class 7. Exercises in recognizing nouns, in the use of the article, in the formation of the singular and plural, in the use of capital letters, in the use of vowel modification in the plural and in the words with *chen* and *lein*; and in syllabication.

Class 6. Exercises in the declension of nouns, alone and with adjectives and as found in sentences; numerous exercises in the use of the genitive and dative cases. Exercises in forming the three principal tenses of the verb in the active voice; exercises in finding the subject and predicate of simple sentences; the use of the prepositions, *mit*, *nach*, *bei*, *von*, *zu*, *aus*, *durch*, *für*, *ohne*, *um*, *gegen*. Exercises in writing long vowels and doubling the consonants, including "ck" and "tz"; in writing words in "ig" and "lich," with the final consonants *d*, *t*, *b*, *g*, *ch*, and *k*. Continued work in syllabication, and in punctuation of imperative, interrogative, and declarative sentences.

Class 5. Exercises in the conjugation of the verb, including the imperative form, the infinitive used as a noun, and the participles. The use of transitive and intransitive verbs with the dative and accusative cases. Exercises in the declension of nouns with adjectives; numerals; pronouns; and nouns in the genitive case. Exercises in the use of prepositions: *an*, *auf*, *hinter*, *in*, *neben*, *unter*, *über*, *vor*, *zwischen*. Exercises in spelling words in which the consonants are doubled words with long vowels, also with final *d* and *t*, *b* and *p*, *g*, *ch*, and *k*, *ng*, and *nk*, and with the *s* sounds.

Class 4. Exercises with prepositions; declension of personal pronouns; use of verbs with the genitive; use of adjectives which govern the genitive or dative; verbs and adjectives which require a preposition; adverbs, and adverbial modifiers.

Further exercises with the *s* sounds. Exercises in writing the short *ä* and *e*, *äu* and *en*, *ai* and *ei*, *s*, *v*, *ph*, and *pf*. Differentiation of *lz* and *ls*, *nz* and *ns*, *x*, *chs*, *cks* and *gs*. Verbs in *ieren*. Easy exercises in the syntax of word formation.

Class 3. Continued work with prepositions. Exercises in the use of verbs which require two cases (the accusative and dative, accusative and genitive, accusative and a preposition with its case); use of complements which are expressed by a preposition and its case, or by the noun form of the verb with *zu*; punctuation; use of conjunctions in compound and complex sentences; conversion of parts of the sentence into subordinate clauses and punctuation thereof; recognition of the parts of speech.

Further exercises in spelling, including spelling of foreign words. Connected repetition and review of the forms and syntax. Word formation.

Class 2. More exercises in recognizing parts of speech. Exercises with verbs requiring two accusatives; changing parts of sentences into subordinate clauses and vice versa; picking out dependent clauses, and their punctuation, correct use of conjunctions, and relative pronouns. Spelling and word formation, and the building of word families.

Class 1. Continued, repeated, and broadened exercises in the whole field of grammar and spelling in connection with the correction of mistakes in compositions and dictations. Further work in word formation and discussion of transfer of meanings.

III. Further independent written work aids in the language training of the children. This written work is for the most part exercises which are prepared in class in a special notebook. The preparation consists of reading, observing, and talking about the subject. As for content, these exercises deal with questions of a real kind, which have been discussed in school or are connected in some way with the child's field of experience. They are to be kept within a moderate latitude. From the seventh class on half an hour a week is set aside for these written exercises. From the fourth class on they take the form of short compositions, which are written in the notebooks in class. Instead of this in the three upper classes, an essay is prepared at home every third week, in which a certain independence and individuality of expression is expected.

IV. Language instruction in the first three years of school finds its supplementary work in object lessons. Beginning with the consideration of real objects, this instruction proceeds to the conception of figurative representation in order to draw conclusions in the observation of the simplest facts of nature, of the local surroundings, and of historical facts, which lie near the child's intellectual horizon.

Class 8. Observation of simple objects in the province of home and school life. First attempts of the children to draw these objects. The schoolroom, the school yard, the school building. Study of pictures and learning of short poems. — Two hours.

Class 7. Observation and talks about particular animals and plants. Simplest observations concerning the path of the sun, and the effects of light and heat. Days and seasons. The months and the days of the week. Pictures and models. Short poems.

Class 6. Further study of particular animals and plants. The street and its trade. Visiting of some buildings and monuments. Information concerning Emperor William the Great and Empress Augusta, Emperor Frederick and his consort, Emperor William II and Empress Augusta Victoria.

Outside the furtherance of language training, German instruction must aspire to furnish an introduction to the national literature, which is suitable to the pupil's point of view. In the upper section, national poems and ballads and poems of historical content, in so far as they have poetic value, are especially to be considered. In the first class, in addition to the most serious and difficult prose and poetical selections in the reader, longer poems are to be read. For this work the following are recommended: *Wilhelm Tell*, *Die Jungfrau von Orleans*, *Minna von Barnhelm*, *Ernst von Schwaben*, and *Hermann und Dorothea*. From the second class on, the children are to be acquainted with the most valuable characteristics and important facts of the lives of the most prominent poets and authors. In every class at least five poems which have been intensely studied are memorized. The children are trained in the declamation of these poems. Folk-songs, selected from the course of study for vocal music, are also to be learned. For the sake of language training it will be useful if in every class some short, valuable prose selections be learned.

The teacher of German must, above all else, direct the use of the school library, for it is desirable that the home reading be made to serve the purposes of the German instruction in school. It is also to be recommended that suggestions which are gained in the other branches of study be turned to account in choosing material for home reading. Thus it would be brought about that the need of reading will be increased, and the children will be sent out into life at the time of leaving school with a lasting, active, well-trained desire for reading.

### Writing:

Class VII. The large and small German letters, the Arabic numerals, and punctuation marks. Copy-books with narrow double lines are used. Two hours.

Class VI. The material in the first semester is the same as in Class 7; in addition, one hour a week in the second semester, the small letters of the Latin script. Copy-books with single lines are used for the German script and books with double lines for the Latin script. Two hours.

Class V. One hour for German, and one hour for Latin script.

Class IV. One hour each for both scripts, and copy-books with single lines only are used in both periods.

Class III. Letters and business forms, etc. Copying of given fundamental forms, and discussion of their content and structure. One hour.



Class II. Writing of more fundamental forms, copies and dictations. One hour.

Class I. Independent preparation of letters and business forms.

NOTE. — Such in general is the course of study in German. Each school is allowed to make a more detailed course of study. The *Lehrplan* is something similar to what we have given above, though for all courses of instruction. The detailed course is called the *Stoffverteilungsplan*. This, as we have said, is made out by each school for itself, or it may be made by the authorities for the schools under their supervision. The detailed course of study outlines the work in each subject week by week for the whole year, and the number of topics, and the topics to be covered each week are determined by this plan, so the teacher knows in just how much time each topic is to be treated. In the general course of study in Germany there is a wide range of choice allowed to schools or the school districts as to what topics shall or shall not be treated, but the teacher himself must follow closely the detailed course of study, which of course is built upon the general course of study. In most German schoolrooms one can find the detailed course of study, and by looking up the present month and week can know what selection the children are reading, what sort of problems are being solved in arithmetic classes, and so on. In some cities, however, the teacher of each single class makes out the detailed course of study, receiving only a general plan for each subject as is given above for German.

Generally a printed course of study contains a number of remarks dealing with general methods to be employed in teaching the subject and aims that are to be attained. Some of the general principles laid down for the teaching of German in the elementary schools are as follows :

**General  
Methods  
Recommended in  
Courses of  
Study for  
German**

1. In every section the child is to be given freedom of expression, so far as the purity, correctness, and naturalness of the language permit.
2. Regular exercises, which consciously connect the word with the thing, and the speech with the act, are recommended in the lower section, in order to increase the clearness and accuracy of the child's conceptions as well as his ability of expression.
3. The study of words is to be carried on in all subjects, if the subject matter can gain clearness and life thereby. This study is to give the

children knowledge of the origin and relationship of words, of the sensual background of many abstract words, of the origin of the figures of speech, and of the transfer of sounds and meanings.

4. The most emphasis is laid upon the spoken language and not upon the written word. The written form shall grow naturally and unforced out of oral expression.

5. A clear, distinct pronunciation is sought after most diligently during the whole school period.

6. Foreign words are to be carefully avoided in all subjects of instruction wherever the German language has understandable words of its own, with the exception of technical expressions in general use.

Though it may be a pedagogical principle of the German elementary teachers to allow the children freedom of expression in recitation and in written work, it is a most uncommon thing to find a teacher who puts this principle into practice. In oral recitation the teacher as a rule insists that the pupil use the words, very often the exact words and sentence structure, which the teacher has used in presenting the subject matter to the class. The child is frequently corrected during a recitation, so often that one comes to the conclusion that the teacher is reciting instead of the child. These corrections by no means concern themselves always with errors in grammar, with content, or with choice of words. Generally such corrections are due to a desire on the part of the teacher to hear his own words again, not trusting the child to form the thought in his own language. The teacher feels it will be safer to have the pupil memorize what has already been said than to risk that the child lose the fact in trying to express it in his own way. The memory method is so largely employed in elementary schools in Germany that an individuality of expression is as a rule badly dwarfed in the pupils. This is not only true of oral expression but also of written work. The compositions are prepared at home, but most of them are talked over at school in advance, so that originality in form and content is lacking,

**Freedom of  
Expression**

because such form and content as these compositions have are given largely by the teacher.

The principle involved in No. 2 is very generally practiced in schools which we have visited, finding its highest development in the *Hilfsschulen* and in the *Arbeitsschulen*, in which speech and action are most closely united.

One of the best characteristics of German instruction in the elementary schools is that it is not limited to the periods exclusively set aside for German. Correct habits of oral speech and written expression are demanded just as vigorously in zoölogy, physics, and geography. An error in grammar is just as quickly corrected in physiology as in a literature lesson. This practice adds not only to the thoroughness of the work in German, but also serves to make the work in all other subjects more accurate and careful.

Correlation  
of German  
with Other  
Subjects

The study of words, in regard to their figurative, literal, and transferred meanings, in regard to their origin and relationships, is carried on in all branches. In the language lessons words are borrowed from all subjects for the purpose of illustration. The majority of teachers, however, believe they can teach the meaning, derivation, and use of words better in their natural setting than they can by lifting the words bodily out of the environment in which they are used and set down in an hour designated as German. The correlation of German with all the other subjects of instruction is most thoroughly carried out.

The principle laid down in No. 4, that the most emphasis is laid upon oral form of expression, is one that goes hand in hand with the oral method of teaching. The children have far less reading to do than American children and also much less writing, the chief form of expression being speech. The children talk much better than they write, very clearly for the reason that they have much greater opportunity for the oral mode of expression. In view of the future occupations of the

Oral Work

larger part of pupils of *Volksschulen*, it is only right that the chief emphasis be laid upon speech rather than upon written work. The lower classes in Germany do very little reading, and still less writing.

Yet in spite of the very great amount of time given to the oral form of expression in the schools, that is, to spoken *high German*, good high German is not used by the ordinary classes at all. One would think, after all these years of compulsory attendance at schools in which *high German* is used, that the people would gradually drop the dialects. Such, however, is not the case. Here in America the difference in the pronunciation which a boy uses in school and the one he uses at home or later in life is not great. In Germany, among the lower classes, the reverse is the case.

One very excellent quality of the instruction in German elementary schools is the distinctness of enunciation both on the part of the pupils and of the teacher. **Enunciation** Mumbling in recitation, reading, or in any form of speech is strictly forbidden. First of all, the children are required to speak distinctly. In no class of all those which were visited did we ever hear children speaking indistinctly. They speak slowly and loudly. The only adverse criticism which can be made of the oral work is that sometimes the children speak too loudly, in fact, they sometimes scream. At all events, screaming is to be preferred to mumbling and stumbling over words. The reasons German children excel ours in this respect are that the teachers set them an example in plain, clear-cut speech, which we do not find in America, and that German teachers continually insist on plain, clear enunciation on the part of the children. In this particular we have much to learn from the Germans.

Just at present there is a great movement in all of the schools of Germany to purify the language of foreign words. In past generations a great number of French words crept into the

language and found general acceptance and use in all classes of society. The present emperor wished to purify the language, and in the last two decades all the schools have been busy in substituting good German words for foreign words in common use. In the higher schools both the foreign and the German word are learned, although in speech and in writing the German word is preferred. In elementary schools one hears foreign words very seldom, and when they are used, it is always with the apology, "If we may use a foreign word." Sometimes this eradication of foreign terms is carried too far, but in general the movement is a good one, for the German words, especially the compounds, are much more intelligible to the children than a foreign word can ever be. For example *Bahnsteig* (railway platform) has been substituted for *Perron*. Any child knows what the elements of the word *Bahnsteig* mean, while *Perron* is entirely unknown to him. Particularly in grammar have German words displaced the Latin or French forms; *Nennwort* or *Dingwort* has been substituted for *Substantiv*, *Zeitwort* or *Tätigkeitswort* for *Verb*, *Bindewort* for *Konjunktion*, *Fürwort* for *Pronom*, and so on. This substitution of German words for foreign ones is taking place in all subjects of instruction and in all schools. Its meaning for the intensification of the national, linguistic feeling cannot be measured.

7. The reading-book is the starting point of all German instruction from the second grade up to the sixth inclusive. In the seventh and eighth grades whole selections, which are capable of arousing the desire to read in the child, may be read, but in the choice of such material any work going beyond the intellectual development of the child is carefully to be avoided.

8. Reading serves as an introduction into the national literature and shall aid in strengthening the child's moral, religious, and patriotic feelings and desires.

9. Home reading is also influenced as far as possible. A part of the German period once a week may be given over to this work in schools which have a library.

10. It seems also advantageous that a number of books, which can be loaned from a public library, be recommended to those pupils about to leave school, in order to direct their reading in the right paths.

We shall speak of the reading books in another place. Not a very large percentage of elementary schools have libraries of their own, although a number do, especially schools in large cities. German elementary school children do not read as much as our American pupils. In the first place, they have not the opportunity, and in the second place, the methods of instruction do not conduce to much reading.

The majority of public libraries do not have children's departments or reading rooms, and those libraries that do have such departments are not used much by the children. It is a very common practice for city libraries to have branches located in public school buildings for the use of the public, especially the children. Such branches are usually open only a few hours each day, and frequently not more than three or four days in each week. As far as our personal experience is concerned, we did not see one child of compulsory age in a public library, and in all we visited thirty-three libraries and reading rooms just for the purpose of seeing who visited them. Statistics show, however, that the children use these libraries to some extent, but actual observation tends to make us believe that reading is not a passion with German children.

There is a great sale of "penny-dreadfuls" among the children of the *Volksschule*. These stories are generally of the "Nick Carter," "Diamond Dick," "Frank Merriwell," "Liberty Boys of '76" style, and owe their origin to our American nickel and dime novel industry. German teachers are striving to overcome the influence of this type of literature, by publishing cheap editions of good novels of war and adventure, Cooper's *Leather Stocking Tales* being of those in most common use. German authorities are not trying to forbid the

Libraries

Cheap  
Literature

publication of cheap literature by law, but are attempting to destroy its sale by cultivating in the children a taste for a better kind of reading.

\*       \*       \*       \*       \*       \*       \*

Observation instruction taken in the sense in which the term is generally used in German schools is limited to the first three years of the school. Observation on the part of the child of its immediate environment is made the basis of instruction in oral language. Observation  
Instruction "The child himself is to learn to observe objects and processes by the use of all his senses, to organize his observations, and to express himself with reference to that which he has observed. *A clear pronunciation is to be practiced carefully in this work.*" Some teachers hold that special hours should be set aside for observation instruction as a special subject, while others hold that observation instruction should be made the beginning of every subject of the curriculum, and that all instruction should in substance be observational. In the majority of the schools we visited, observation instruction (*Anschauungsunterricht*) as a special subject was essentially a part of German rather than of any other subject. The principle of learning by observation is employed, of course, in the teaching of all subjects.

Just in this connection, however, we have seen the poorest teaching which came to our notice. Quite a number of teachers of science fail to make the most of the child's desire to observe and handle the objects under discussion and to tell his own reactions thereto. Frequently we have seen teachers bring specimens of animals to a class and never ask the children what they saw, but merely give the children those facts which seemed important. On asking teachers why the children were not allowed to talk about the objects being studied and to relate their own experiences, we have invariably gotten the reply, "That would destroy discipline."

It is part and parcel of the purpose of the whole elementary system of education in Germany to destroy individuality and initiative among the lower classes. The ruling classes have decided, one might say, what a boy or girl of the lower classes is supposed to see and observe even in the simplest processes of learning. They know that if initiative and individuality are killed in the children, these qualities cannot live in them when they become men and women. And to uphold the system of government now in vogue, it is absolutely necessary that the masses have neither individuality nor initiative, but rather observe what they are supposed to observe, think what they are supposed to think, and act as they are supposed to act.

**Intentional  
Destruction  
of Individu-  
ality**

As a rule, there is no set list of topics to be used as the basis of observation instruction. One usually hears the beginners talking about the home, the school, the school yard, or the garden, some topic which the children can actually observe, and with which they are intimately acquainted. A great deal of use is made of pictures to illustrate the seasons of the year, the country, the city, landscapes, harvest-time, the family, and activities for which the child always feels vital interest.

**Subject  
Matter**

Pictures are only used, however, in the majority of cases when the actual observation is not possible or the experience of the child does not suffice. In many instances teachers begin the work in oral language by telling the children fairy stories, and illustrating them by means of pictures. Almost every German city or village has its legends and fairy stories, and these are widely used by the teachers at first to awaken the child's desire to tell what he has experienced.

**Methods**

In many schools observation instruction consisted merely in describing what had been seen. In the more progressive schools



the children were allowed to use other means of expression, such as drawing, cutting, building with sticks, and modeling with clay or plasticine. It was the exception, however, to find such work.

The chief criticisms of the observation instruction in the elementary classes which we visited are (*a*) that the sense of sight is chiefly employed in forming conceptions of the external world of the child, (*b*) that speech is the only form of expression employed, (*c*) that there is no principle laid down for the selection of topics to be taught, and (*d*) generally too many objects are observed.

In another chapter "undifferentiated instruction" has been spoken of as being adopted in the first year of some schools. It deals chiefly with organization of subject matter, the formal subjects of instruction not appearing during the first months of work. In school systems into which "undifferentiated instruction" has been introduced, the methods employed are largely observational in character. In fact, "undifferentiated instruction" is an attempt to bring about the realization of a "work-school" for beginners instead of a mere "learning-school," and therein to realize the ideal of modern observation instruction — that is, to learn through observation and expression.

Observation Instruction as an Undifferentiated Instruction

Reading, writing, and arithmetic, as separate subjects, take practically all the time in the beginning class of the typical German school, while two or three hours a week are devoted to observation instruction, which is usually treated as a part of the oral language work. There exists naturally a wrong relation between the knowledge of things and the three R's, which contains a danger for the mental development of the child. This danger arises when the transmission of new ideas and concepts takes place through the written and spoken word rather than through observation and objective experience. Instruction

which consists solely of words and pictures leads to verbalism and juggling of words, without bringing about real intellectual training.

Some of the educational reformers are demanding that the usual course of instruction and methods employed in the first year of school be entirely changed in order to do away with the false relationship which exists between the time given to the traditional subjects and the time given to observation work. To accomplish this end observation instruction is to be made the basis of all the work of the school, and in the first year of school it is to be the only subject, — an “undifferentiated observational instruction,” out of which the ordinary subjects shall arise during the course of the first year or at the beginning of the second.

This idea is by no means a new one in Germany, for it was put forward in the past by von Rochow, Denzel, Knauss, Bräutigam, and many others. The only question is with regard to the length of such work. In nearly all the city systems which we visited there was some sort of a preparatory observation and language course, covering periods varying from a few weeks to half a year.

We were told that there were many difficulties confronting the continuation of “undifferentiated observation instruction” throughout the whole first year. Chief among these difficulties were that the parents wanted the children to read as early as possible, that the courses of study demanded that children read and write before the end of the first year, and that it was difficult to get material to fill up a whole year in this manner. In spite of these objections this general type of instruction based on observation is rapidly gaining ground. In Posen a preparatory course in observation and language has been approved for the bi-lingual schools of that city, and the requirements in formal reading and writing have been lessened. Leipzig has experi-

mental classes in which the "undifferentiated instruction" is extended over the entire beginning year.

As a rule, observation instruction as a special subject is merely one phase of German, but as a principle, observation is used in all subjects to a greater or less degree.

Observation in Relation to Other Subjects

We are inserting here stenographic reports of two lessons given in Hannover in January, 1914. The first one was in the VII. Class, or the beginning class, and the second in the V. Class or third year.

CLASS VII S. HANNOVER. 37 GIRLS. GERMAN. OBSERVATIONAL INSTRUCTION

(The teacher explained to me that the class discipline was made as easy as possible in order to win the confidence of the pupils, who, coming chiefly from poorer homes, were very shy and difficult to cause to talk. As has been remarked in another place, the discipline is so strict, or rather the fear of the teacher is so great in some classes, that many children are almost afraid to recite. This was not the case in this class, and it is by no means true of all classes.)

*Teacher:* Tell me how a snow man is made.

*Pupil:* We roll together two big balls of snow; out of one we make the feet and legs, and of the other the body and arms. Then we put a small ball on top for a head, put a cane in one hand, and borrow a hat from father to go on his head. The eyes we make of coal and we put a pipe in his mouth.

*Teacher:* How do we make a snow man in school?

*Pupil:* We make him out of clay.

*Teacher:* Who will tell me how we make the snow man out of clay?

*Pupil:* We took some white clay and made the legs and feet and body. Then we rolled the head out of some more white clay, then we took some pink clay for the nose and a strip of red clay for the lips. Then we made the cane out of brown clay. Then we made some long strips out of yellow clay and —

*Teacher:* What were they for?

*Pupil:* They were the hair. Then we took some brown clay — a square piece and a little round and about this high.

*Teacher:* What did you do with that?

*Pupil:* That was his hat. For the eyes we used small pieces of coal.

*Teacher:* What else did we make?

*Pupil:* A sled.

*Teacher:* Tell me how to make a sled.

*Pupil:* First we make two long —

*Teacher:* What do you call these long, straight pieces underneath a sled?

*Pupil:* Runners.

*Teacher:* What do we do first?

*Pupil:* First we make two runners and then put a board on top where we sit.

*Teacher:* How can we represent snow?

*Pupil:* We can represent snow with small papers or salt.

*Teacher:* Tell me how snow comes.

*Pupil:* At first there are a great many drops of water away up in the sky. They go out where it is very cold and then turn into very small needles of ice. They become very much afraid, and one of them says to his fellows, "Give me your hand," so they all form star-like groups and fly down to earth and light up Lieschen's coat. When the little girl sees it, she cries, "Oh, what a pretty snowflake!"

*Teacher:* What animals do not suffer from cold and hunger in the winter when there is snow?

*Pupil:* Domestic animals.

*Teacher:* Name some domestic animals.

*Pupil:* The dog, cat, cow, horse, and chickens are domestic animals.

*Teacher:* Why are they called domestic animals?

*Pupil:* They are domestic animals because they live near the house.

*Teacher:* Why don't domestic animals suffer from hunger in the winter?

*Pupil:* Because they are fed by the people.

*Teacher:* Do any animals suffer from cold and hunger when it is winter?

*Pupil:* Yes, the migrating birds (*Zugvögel*).<sup>1</sup>

*Teacher:* Do they?

*Another Pupil:* No, because they fly away where it is warm, but the birds which stay through the winter suffer from hunger.

*Teacher:* Why?

*Pupil:* They suffer because the ground is covered with snow and they can get no worms or seeds.

<sup>1</sup> (The little girl who used the word "*Zugvögel*" had pronounced it as if there were a "t" between the "g" and "v," and at this point the teacher went back to take up the mistake.)

*Teacher:* Who takes care of these birds when it is so cold?

*Pupil:* Some people throw crumbs and seeds on the snow, and the little birds come and eat them.

*Pupil:* And sometimes people throw out bones with a little meat left on them and the birds pick the meat off.

*Teacher:* From what word does "Zug" come?

*Pupil:* "Zug" comes from *ziehen*.

*Teacher:* Better perhaps from "*zogen*." How do you spell "Zug"?

*Pupils:* (spelling phonetically together) "Z-u-g."

*Teacher:* Is the "g" hard or soft? (No reply.) The teacher then shows the children how the two "g's" are pronounced, and they are drilled on the pronunciation. This g sound is called a guttural. (The German word is *Gaumenstosser*, which means that the breath is forced against the roof of the mouth in making the sound. The word is perfectly clear to German children, for both parts of the compound are very common words.) How do you make the sound "t"?

*Pupil:* You put the tongue against the upper teeth and the breath forces it down, then the sound is "t."

*Teacher:* What do you call that kind of a sound?

*Pupil:* That is called a dental (*Zungenstosser* — a sound which bumps into the tongue) because the breath strikes the tongue and knocks it down to the bottom of the mouth.

*Teacher:* How is the "b" sound made?

*Pupil:* We hold the lips tight together and then puff the breath out between them suddenly.

*Teacher:* Now let us go back to the birds. Sometimes people build little houses especially for birds where they may come to eat. How many ever saw such a house?

*Pupil:* There is one on the blackboard.

*Pupil:* Out in the woods the other day I saw a house on a tree. There was a little hole in the box and a stick fastened on the side of the box.

*Teacher:* What do you suppose Bertha saw?

*Pupil:* That was a little bird house, where the birds sleep.

*Teacher:* Yes, that was the house, but not a house especially built for feeding the birds.

(The lesson was not quite finished. Some little girls had been excused in order to get the "milk breakfast" which was furnished free by the city to those children who come from homes which cannot afford to buy milk.)

## CLASS V A. HANNOVER. OBSERVATION INSTRUCTION. 54 GIRLS

(This lesson is to be read in connection with the arithmetic lesson on page 374. Work was based on a walk taken by the pupils with their teacher.)

*Teacher:* How were the dead buried here a long time ago? Here in Hannover, I mean.

*Pupil:* The dead were laid in a hollow stone grave together with arrows, spears, knives, axes, then over the top was put a stone slab and on top of that earth and grass, so it looked like a giant's grave.

*Teacher:* What are these graves called?

*Pupil:* They are called *Hühnergräben*.

*Teacher:* They are called stone houses. There are quite a number of them in the Lüneburger heath. Why do we think this kind of grave the oldest?

*Pupil:* We think they are the oldest because they are made of stone and the things in them are all made of stone, the arms, and other instruments.

*Teacher:* What is this age called?

*Pupil:* It is called the Stone Age.

*Teacher:* What was the next age called?

*Pupil:* The next age was the Bronze Age.

*Teacher:* Why was it called the Bronze Age?

*Pupil:* Because the weapons and tools were made of bronze. And the dead were burned and the ashes were put in bronze urns, along with bronze bracelets, chains, ear-rings, hairpins.

*Teacher:* What else was there generally in or near the urn?

*Pupil:* Sometimes there was a tear-cup, for the tears of the relatives.

*Teacher:* Tell me the story of the little cup (*Krüglein*).

*Pupil:* Once upon a time there was a mother who had a little child. One day the child became very ill and in spite of all the mother could do, the child finally died. The mother was not to be comforted, but wept and wept every day. She did not know how to live without the child. One evening as she was sitting alone crying, the child appeared to her and said, "Mother, you must not weep for me any more. The cup for your tears is now full and if you shed another one, the cup will overflow and I shall never have any peace again." Then the child vanished. The mother stopped crying at once, for she did not wish her child to be unhappy.

*Teacher:* What do we call this age?

*Pupil:* Bronze Age.

*Teacher:* No, give a complete sentence.

*Pupil:* We call this the Bronze Age.

*Teacher:* Where did Hannover get its name?

*Pupil:* Two fishermen one time wanted a place to build a hut so that when the Leine flooded there would be no danger to them. So they built a hut here at what is now called Hannover, but they called it *Hohen Ufer*, which has been changed into Hannover.

*Teacher:* The Leine floods every year. When?

*Pupil:* The Leine floods in the Spring.

*Teacher:* Why does a river flood in the Spring?

*Pupil:* The snow on the mountains melts and floods the rivulets, these all come together and fill the brooks and then these flood, and finally the river is so full that the banks no longer can hold the water, and it flows out on to the meadows.

*Teacher:* We have floods here every year. Is it a good thing?

*Pupil:* It is good because it brings fertilizing soil and moisture to the meadows, but the water must not remain too long.

*Teacher:* What fields must not be flooded?

*Pupil:* The corn and wheat fields must not be flooded, because if they are too wet the grain will not grow.

*Teacher:* Who was the first prince of Hannover?

*Pupil:* The first prince of Hannover was Henry the Lion.

*Teacher:* Why was he called Henry the Lion. Let us read the story.

(The story was read by the children, each one reading a paragraph aloud to the class.)

Henry came to Hannover first in 1163. He built a castle. Where was it?

*Pupil:* It was in *Burgstrasse*.

*Teacher:* Besides the castle he built a wall about the city. The wall had thirty-five towers. Name some of them.

*Pupil:* The Beguinen Tower (notes lacking here).

*Teacher:* No, not all of these were in the city. Henry built a number of towers in the forests outside the city in order to protect the wall, as the *Lister Turm* and the *Dürner Turm*. What was the highest and finest tower of all?

*Pupil:* The Beguinen Tower. (This tower was drawn on the blackboard.)

*Teacher:* Where is it?

*Pupil:* It is *am Hohen Ufer*.

*Teacher:* Henry had also a castle on the left bank of the Leine. It was called *Burg Lauenrode* and it was built in 1215 and was meant as a fort to protect the city. He put a castellan in the castle to take care of it. Later, however, the castellan thought he could force the citizens of Hannover to do his will, but the people objected and destroyed the castle in 1371. The Jewish Temple stands there now. What Burg did the Duke build?

*Pupil:* He built *Burg Lauenrode*.

*Teacher:* How long did it stand?

*Pupil:* It stood until 1371.

*Teacher:* Why was it destroyed? (None of the children knew, so the teacher repeated the remarks above.)

*Pupil:* How was it destroyed?

*Teacher:* The Burgers of Hannover surrounded the fort and hurled heavy rocks against it and took the castellan prisoner and killed him. What churches were here then?

*Pupil:* The *Marktkirche* was built in 1250 (drawing on the board). It had the highest tower of all, 95 meters.

*Teacher:* What is the tower covered with?

*Pupil:* It is covered with copper.

*Teacher:* What happened to the tower of the church a long time ago?

*Pupil:* In the middle ages the top of the tower fell off.

*Teacher:* Who lived there?

*Pupil:* A watchman lived there. His duty was to blow a horn at the hours and watch for fires throughout the city.

(The hour ended at this point, but the lesson was continued in the following period.)

\* \* \* \* \*

## READING

The day of the primer is rapidly passing in Germany. Some schools still use it. The blackboard is now in most common use, although one finds still a great many charts and reading frames or boxes. One finds almost every known method in use in Prussia except that it is forbidden to use the alphabet or spelling method. One finds the phonic

Reading in  
First Class



method, the word-script method, the analytic, the synthetic, and the normal-word methods. Phonetics are used universally. The names of the letters are rarely ever learned in the first year.

Very often the phonic method is begun only after a number of words or short sentences have been learned. Then the study of some of the more common and important consonants is begun and gradually they are combined with vowels and new words are built up, or the ones already learned are spelled phonetically. Many words are developed from the children's activities or from the description of pictures. When a little vocabulary is gained, reading of sentences is begun.

**The Phonic  
Method**

Some schools use the normal word method. They begin with learning thirty or more words as wholes and then they are analyzed. The sounds and signs acquired in this way are made the basis of acquiring new words. Sometimes the teacher spends a whole day in learning a "normal word," while other teachers spend three or four days on the same word, discussing it in all the situations in which the child is acquainted with it.

**The Normal  
Word  
Method**

The script method and the word and sentence methods are taught in much the same way as in America. The question as to whether reading and writing should be taught together is still a debated one. The more progressive teachers postpone writing until after the child has learned to read. Many schools do not undertake any reading at all until the second half of the first year, devoting all of their time to a composite or undifferentiated instruction by which the child accustoms himself to the school and learns to talk freely and without hesitation.

The German child has a rather hard time when it comes to writing. He must learn to write both German and Latin script. He generally learns the beginning of the German script in the first year and the Latin script in the second year.

**Writing**

German script is exceedingly difficult on account of the many sharp angles and shading lines which are necessary. The first writing is usually on slates or with pen and ink. Very few schools use pencils. Of course, all schools use the blackboard, but only to a limited extent.

The teachers begin first with the very simplest letters, which consist of straight lines, and as the children acquire these movements, the work advances to its more difficult stages. We were somewhat surprised to see the large number of slates that are still in use. Each child has a slate and a sponge which is attached to his seat. The system is at the least not very sanitary. If the children write with ink, and this work is always begun very early, a very stiff, sharp pen is used. The stub pen or ball-pointed pen is first used in the higher classes.

Practically all of the writing is given as class instruction. The children are kept very close together and as the teacher counts or beats time, they write. "Up," "down," "up."

At each word the child makes a mark until the whole process is thoroughly learned. Writing instruction is kept up two hours a week in the lower section, and thereafter an hour a week.

The models from which the children write are put on the board by the teacher. Copy books are not allowed. The copy may be only letters, or a sentence, in which case it is the traditional proverb.

The results obtained by teachers in Germany are simply marvelous as far as writing is concerned. One rarely sees a blot of any kind. The work is invariably neat and clean. In the upper grades some of the handwriting books look like steel engraving.

The reading book is the basis of all German instruction in the  
The Reader *Volksschulen*. Readers are usually adopted by counties, but sometimes also by provinces, and in most cases very large cities use a different reader from surround-

ing towns though they may be in the same county. Naturally the number of books in a series varies with the kinds of schools in which they are used.

Ordinarily three books compose the reading series, one volume each for the lower, middle, and upper sections. The first grade has no book at all or a primer. The first book has usually two hundred or more pages, the second about four hundred, and the third about six hundred. Illustrations are few and inferior.

The general character of the selections is the same in all readers. We quote the general subjects in Hirt's *Lesebuch* for the Province of Brandenburg — Book II.

A. Pictures from Life.

1. The father's house and the home.
2. Our duties.
3. Occupational sketches.

B. Man and God.

C. Changes of Seasons.

D. Geographical Selections.

1. The home.
2. The Fatherland.

E. Popular tales and myths.

F. From the history of our people.

The general subjects in Book I of the same series are as follows:

A. Pictures from life.

1. Parents and children.
2. At home and abroad.
3. Healthy body — healthy soul.
4. Human duty and honor.
5. The world of commerce and labor.
6. Social economy.
7. War and peace.
8. At sea.

- B. God and Eternity.
  - 1. God.
  - 2. In death.
  - 3. Guilt and punishment.
  - 4. Sketches from the life of the church.
- C. From Nature.
  - 1. Thoughtful observation of nature.
  - 2. General natural science.
- D. Sketches from geography.
  - 1. Home and the Fatherland.
  - 2. From foreign lands.
  - 3. From our colonies.
  - 4. Astronomy.
- E. Historical sketches.

From the above outlines it can be readily seen that almost every phase of human activity is touched upon. The reader, with its wide source of selection, can be used in correlation with almost every subject in school. The general content of the readers is supposed to meet the needs and conditions of the respective communities. The historical and legendary selection, as well as those relating to geography and industry, refer as far as possible to the child's immediate environment. As far as possible the authors whose works are chosen for use in the readers represent the very best there is in German literature. This ideal is held to, even with regard to the geographical and scientific portions of the texts.

Reading, particularly oral reading, is rather inferior. The children seldom read with expression or individuality. One child's reading sounds almost like that of every one else in the same room. There are several good features in the work which concern the technique of good reading. The children always read loud enough to be heard — and very often too loud. No matter where one sits in a room; no matter whether one even tries to listen, every syllable is audible. Quite

a number of the children seem to shout. The enunciation is always excellent. There is no mumbling or swallowing of final syllables. Every ending is brought out sharply and clearly. If a word is pronounced at all, it is pronounced loudly and clearly enough to be heard by every one, and if there is an error in pronunciation, the teacher knows immediately what it is.

Reading is practiced in all the different subjects, not alone in the reading hour. As far as our observation went the reading in the history and geography classes was better than in the German classes. However, in general there is no attention paid to the rate of reading, which is invariably too fast. Expression in reading is an unknown quantity.

Silent reading is not as common as in America, because of the difference in methods of instruction. The German child does not have to read in order to acquire his material for reproduction — his source is his teacher.

In many ways it is not so important that the children become particularly good oral readers on account of the lack of need for oral reading in after life. The same is true of silent reading to a less extent. The German lower classes are not a reading population, as we have said heretofore.

The teacher always helps the children in preparation for a reading lesson in several ways. First, he reads the lesson to the children with an attempt to get the spirit of the selection over to the children. He also aids them in understanding any technical or linguistic difficulties, or any new word which may arise in the new lesson. The procedure in this respect varies, of course, with the nature and difficulty of the selection. In the majority of lessons a great deal of attention is given to the setting, to the spirit (*Stimmung*) of the lesson, particularly in the treatment of poems and patriotic selections.

One of the best features of the reading is the oral reproduction of the passages which have been treated in class. For

example, if the reading has dealt with the Battle of Sedan, a child is given an opportunity to tell the story. He does this very largely in the words and language of the book. In fact **Oral Reproduction** he frequently commits a great deal of it to memory. Teachers believe that in this way his vocabulary of good words and expressions is materially increased.

German teachers and school children are particularly fond of poetry. In addition to a great number of songs which must be learned for the singing hour, the child usually has to **Poetry** commit to memory during his school course about fifty poems of varying length. Naturally the memorization of the poem is about the last step in its treatment. The method is usually as follows. The teacher talks a little about the content of the poem, its history, the author, and its general setting. Then without a book the teacher reads the poem, and usually very well. Sometimes he reads it again. A child then tries to repeat the first stanza as a whole, then another child tries, and perhaps a third. Then the whole class tries with the teacher's help. Then the second is learned, until the poem is finished. The next day some one tries again to repeat the whole poem. Repetition of the poem is kept up at continually lengthening intervals throughout the year and the following years. Once having learned the poem in this way the children, I am told, rarely forget it, even many years later in life. It is astounding to the visitor to see how many poems the children know, and it is still more astounding when one thinks of the large number of songs, sacred and secular, which they must learn, as well as the great amount of memoriter material required in religion. National patriotic poems, poems of nature, and ballads are the most popular. Many children commit to memory Schiller's *Lied von der Glocke* and *Wilhelm Tell* as well as many longer passages from Goethe.

There are always many selections in the reader chosen for

their classical literary value. The number of longer selections is usually very small, but these are very thoroughly handled, somewhat in the same way as "The Sailor of Hallig," which is given in this chapter. The longer poems are reserved for the last two years of school. The teachers seem particularly well prepared to present literary German. More genuine enthusiasm was exhibited by the teachers and pupils in the treatment of *Wilhelm Tell*, *Die Jungfrau von Orleans*, and *Minna von Barnhelm* than in any other subject in school, unless we except history and singing. We are convinced, however, that the treatment of certain poems is not original with the majority of teachers. The standard poems used in the *Volkschule* are found in thousands of model lesson books which are to be had at every bookshop. Every step, even the answers of the children, is given in these prepared lessons, and many teachers follow the models slavishly. This, however, is true of almost every topic in every subject in the whole curriculum.

\*   \*   \*   \*   \*   \*   \*

Grammar is taught in practically every grade in school in an informal way. No special hours are set aside for it, except occasionally in the upper classes. Ordinarily only a few minutes of each hour are given over to formal grammar discussion. Grammar, or, still better, correct grammatical usage, is insisted upon and taught in every grade and in every subject. Bad German is absolutely forbidden at all times. "Every lesson a German Lesson" is the law. We have already indicated the course of study in grammar. The work is brief and thorough. Grammatical usage rather than grammatical theory is the strong point in this field.

Selections from the reader, compositions of the children, and oral speech in all classes are made the basis for selection of subject matter. The difficulties in German are attacked and explained wherever they are found. If a boy

Literature

Grammar

Subject  
Matter

makes a mistake in the use of a plural in arithmetic, history, or science, the error is corrected in that class where it is needed and in the situation where it occurs. Compositions in all classes, of course, especially in *German*, are the best basis for grammatical instruction. Dictations, while used also for spelling and punctuation, serve as more formal subject matter for grammar. Rules are developed in the class from the examples studied. Texts are used in some schools. These are issued in a series, usually one book or pamphlet for each class above the lowest one. They are for drill and are in the hands of the pupils. They are never made the starting point in the instruction; they contain no rules. The subject matter is merely to test what the children have learned in connection with their other grammar work. Many teachers hold these books to be unnecessary, and say that enough drill to establish correct usage can be secured in other ways. Analysis by diagram did not come to our notice at all. Oral analysis is universal, but hair-splitting distinctions are entirely avoided. For example, such a thing as classifying subordinate conjunctions into all their many classes is unheard of. The larger elements in the sentence are picked out. Recognition of nouns, adjectives, prepositions, verbs, adverbs, conjunctions and pronouns, declension, and conjugation of words take up most of the time. The form is rarely separated from its use in a sentence.

Spelling and punctuation begin at the very first and continue in every grade, and in all classes. Spelling lists are always made up from the other work in school. Detached spelling lessons do not occur. An attempt is made to group words which are similar in sound and in spelling. Special hours for spelling do not appear in the curriculum. It is a part of the German hour. Since German is a more nearly phonetic language than ours, the German child does not have to spend a great amount of time on spelling. Almost all words are spelled

Orthog-  
raphy



just as they sound. This is one great saving of time in the German schools. What the child makes up in spelling he loses in the difficulties brought about by an inflected language. Every noun, adjective and verb is modifiable. The children must learn to spell all of these modified forms, which is no easy task.

Compound words and formation of words, as well as word groups on the same stem and words of changed meanings, require a great deal of time, although there are not many difficulties involved. A long word in German is much easier for a German child than a long word in English for an American child. The German word is made up of simple parts which are perfectly clear to every child; in English these parts are usually from Latin and Greek elements which are clear to but few.

Dictations are the basis of much of the work in orthography. The teacher reads a familiar, or unfamiliar, passage to the children. They are expected to write it correctly with respect to spelling, punctuation, and form. These are corrected in class and discussed. Only the most frequent errors are dwelt on at any length. The children give the correct form if possible, while the teacher helps only in case of necessity. The dictation books are collected and corrected from time to time by the teacher.

One can see the mechanizing effect of German methods in the composition work better than in any other. Written work in the German class is made up of oral composition, dictation, short themes of a paragraph or more, and compositions or essays. All of these exercises except the last are carried on throughout the school.

The aims of written work in the *Volksschule* are to bring order and system into the child's thought, "to accustom the child to intellectual work and particularly to independent activity," and to ground his knowledge in various fields

of learning. "These are the pedagogical aims. The practical aim is to enable the pupil to present his thoughts with clearness and linguistic accuracy." The child possibly achieves all these aims except that of independent thinking. The teacher does all of the thinking, the organizing, and judging. The child merely writes it down.

In the very lowest grades the first type of language composition is oral. The child is taught to tell a story which has been told to him, to relate his experiences at home, to tell about his pets. In the middle section of the school the child has a daily written exercise in German or in some other subject. This exercise (*Niederschrift*) is usually mere writing down a summarization of a lesson. The summarization, of course, has been made in class or at least has been discussed so that there is very little independent ability called for. However, as the children go into higher classes the content of these written exercises becomes more and more original. One notes all the way through a very striking resemblance in content and form of expression in any given set of exercises.

The more formal compositions are required once every two weeks. The subject matter of these compositions, although they are supposed to be independent work, is discussed in class. The teacher and children determine topic sentences covering the introduction, the development or treatment of the subject, and the conclusion. The compositions printed in this chapter illustrate the results obtained. The result is uniform in thought, sentence structure, style, and form. Often the sentences are identical. These compositions are put in little exercise books, which the teacher carefully corrects and returns. The children must rewrite the paragraphs in which errors occur.

No other activity in the German schools shows so clearly the conscious attempt to cast all the mental activity of the children in the same mold. It can be condemned or approved — all

depending on the point of view. Some may ask, "To what purpose shall these children of the lower classes be trained to write independent, original composition?" These people answer their own question and say that these children are never called on to write anything that's original and independent, so why learn it?

One or two other features of the written work in the school are worthy of mention. Letter writing, both personal and business correspondence, receives a great deal of attention. The children acquire great facility and a good formal style, which all know who receive German letters. The forms of expression are somewhat stilted, but they are always clear and excellent German. The children also learn to fill out all kinds of business forms, receipts, postal order blanks, checks, and the like. This would be an excellent thing for all of our schools and even our colleges, for no one ever heard of a group of fifty people in an American school being able to fill out any kind of a blank correctly.

The teacher of German never tries to correct all the errors in the written work. He picks out the high spots and drills on them and then passes on to the next most important point. The teachers have strict orders not to fritter away their energy in reading and re-reading compositions. This is also an excellent point for some of our overconscientious but unwise teachers of English. Corrections

The work in German as a whole is not satisfactory from our point of view. It is entirely too formal, too cut-and-dried, too deadening. It produces poor writers, poor readers, but good memorizers. But since the German government does not want to develop writers and readers out of its lower classes, the school cannot be said to fail in this respect. It would be an interesting experiment to see what the children in the manufacturing sections would write and put into their compositions if given perfect freedom. On the other hand, the Conclusion

German work in its oral phases, aside from its lack of originality, has many features of charm. The interest of the children in telling fairy tales, and myths, in reciting poems and reciting the deeds of great Germans is truly delightful.

LESSON IN GERMAN LITERATURE. SIXTH CLASS

*The Sailor of Hallig. Allmers*

1. "*Kapitän*, ich bitte euch, lasst mich fort.  
O lasset mich frei, sonst lauf' mich von Bord,  
ich muss heim, muss heim nach der Hallig.  
Schon sind vergangen drei ganze Jahr',  
dass ich stets zu Schiff, dass ich dort nicht war,  
auf der Hallig, der lieben Hallig."
2. "Nein, Jasper, nein, das sag' ich dir:  
noch diese Reise machst du mit mir.  
dann darfst du gehn nach der Hallig.  
Doch sage mir, Jasper, was willst du dort?  
Es ist so öder, armseliger Ort,  
die kleine, die einsame Hallig."
3. "Ach, mein Kapitän, dort ist's wohl gut.  
und an keinem Ort wird mir so zu Mut.  
so wohl als auf der Hallig;  
und mein Weib hat nur mich manch' traurige Nacht;  
hab' so lang' nicht gesehen, wenn mein Kind mir lacht,  
und Hof und Haus auf der Hallig."
4. "So höre denn Jasper, was ich dir sag':  
es ist gekommen ein böser Tag.  
ein böser Tag für die Hallig.  
Eine Sturmflut war wie nie vorher,  
und das Meer, das wildaufwogende Meer  
hoch ging es über die Hallig."
5. "Doch sollst du nicht hin, vorbei ist die Not,  
dein Weib ist tot, und dein Kind ist tot,

ertrunken beide auf der Hallig.  
Auch die Schafe und Lämmer sind fortespült,  
auch dein Haus ist fort, dein Wurt zerwühlt;  
was wolltest du tun auf der Hallig?"

6. "Ach Gott, Kapitän, ist das geschehen?  
Alles soll ich nicht wiedersehen,  
was lieb mir war auf der Hallig?  
Und ihr fragt mich noch, was ich dort will tun?  
Will sterben und im Grabe ruhn  
auf der Hallig, der lieben Hallig."

The poem was read through first by the teacher.

*Teacher:* A sailor from Hallig begs his captain for permission to return home. Repeat what I have just said.

*Pupil:* A sailor from Hallig begs his captain for permission to return home.

*Teacher:* Explain the expressions, *captain* and *sailor*.

*Pupil:* The captain is the commander of the ship, the sailors do the rough work on the ship; they keep the ship clean, cast the anchor and take it up again, loosen the sails and then fasten them up.

*Teacher:* Why is the sailor, of whom the poem tells, called the sailor of Hallig?

*Pupil:* His home was on one of the Hallig Islands.

*Teacher:* Show me the Hallig Islands. Point to one of the larger groups.  
(Pupil points to them on a map.)

*Pupil:* Those are the North Friesian Islands.

*Teacher:* Tell me their position.

*Pupil:* They lie in the North Sea on the west coast of Schleswig.

*Teacher:* Why do sailors fear the North Sea?

*Pupil:* Very heavy and dangerous storms often break over the North Sea.

*Teacher:* What did I say at the first of the hour?

*Pupil:* A sailor from Hallig begs his captain for permission to return home.

*Teacher:* What questions come to mind?

*Pupils:* Why does the sailor want to go home? Will the captain grant his request?

*Teacher:* The first stanza of the poem answers the first question. Read it through quietly. (The children read the first stanza to themselves.) Answer very briefly.

*Pupil:* The sailor is homesick.

*Teacher:* Why do you think that?

*Pupil:* He loves his island home and was not there for three years. All this time he was on the ship.

*Teacher:* But with all his homesickness he will remain a brave sailor. How do we know that?

*Pupil:* He has not fled secretly, but asks his captain to let him go.

*Teacher:* How do we know that he can no longer control his longing for home?

*Pupil:* He says to the captain, "If you do not let me go, I shall run away, I must go home to Hallig."

*Teacher:* Did the captain refuse this request? Read the second stanza. (Children read the second stanza silently.) Why don't we have to use the word *sailor* from now on?

*Pupil:* Because we know the sailor's name is Jasper.

*Teacher:* What reply does the captain make to Jasper's request?

*Pupil:* The captain tells Jasper that he must make the trip with him and that he cannot go to Hallig.

*Teacher:* The captain does not appear to understand Jasper's longing. What does he ask?

*Pupil:* What do you want there? Hallig is a desolate, poor place, a small, lonesome island.

*Teacher:* That is the way a person would talk who does not love Hallig. But what do we know already from Jasper?

*Pupil:* Hallig is very dear to Jasper because it is his home.

*Teacher:* Can there not be a more special reason why he feels such a longing for Hallig?

*Pupil:* Perhaps he is married, or has a sweetheart there, or his mother lives there still.

*Teacher:* Now read the third stanza. What is the reason?

*Pupil:* Jasper has his wife, child, and home on Hallig.

*Teacher:* What desire draws him to his wife and child?

*Pupil:* His wife is anxious about him and can often not sleep for worrying about him. She fears that some misfortune may have overtaken him. How she would rejoice if she saw him living and well again. His child smiled at him so sweetly the last time he was at home, and that smile he has not seen for a long time.

*Teacher:* In general what does Jasper think of Hallig?

*Pupil:* No place in the world makes him feel so well as Hallig. It pleases him better than all the rest of the world.

*Teacher:* Summarize the content of the first three stanzas under a heading (or in one sentence).

*Pupil:* Jasper would like to go home to Hallig in order to see his wife and child.

*Teacher:* The captain has given no good reason why he will not let Jasper go. What question remains to be answered?

*Pupil:* Why will the captain not let Jasper go?

*Teacher:* Read the next two stanzas. Answer very briefly.

*Pupil:* The captain wishes to spare Jasper great pain.

*Teacher:* Relate what happened one day.

*Pupil:* A bad day came at Hallig. A tidal wave came such as had never been seen before. The sea rolled high over the island. Jasper's wife and child were drowned. The sheep and lambs were all washed away, the house was destroyed, and its foundation ruined.

*Teacher:* What would the captain surely have done if some one had told him that Jasper's wife and child were in need?

*Pupil:* He would have let him go home.

*Teacher:* But now?

*Pupil:* Now it wouldn't do any good for him to go home. The need is past, he cannot help his family any more and what he would see on the island would only make him sad.

*Teacher:* So that captain meant well. What is the last question?

*Pupil:* Does Jasper remain on board ship?

*Teacher:* Read the last stanza. Answer, giving the heading covering stanza four to six.

*Pupil:* Jasper still wishes to go to Hallig in order to die and be buried there.

*Teacher:* Repeat the two headings.

*Pupil:* Jasper would like to go home to Hallig in order to see his wife and child. Jasper still wishes to go to Hallig in order to be buried there.

*Teacher:* Read the poem aloud. (The poem is read aloud.)

*Teacher:* How does Jasper feel toward his island home?

*Pupil:* He loves it.

*Teacher:* Why is that hard for a stranger to understand?

*Pupil:* Because Hallig is a small, desolate island. There are no mountains, no forests. One cannot take long walks. Other human beings are seldom seen. What one needs must be brought from a great distance. People are always in danger of being swept away by the water.

*Teacher:* And still the saying is true of Jasper. Home is always beautiful. What may have made him love Hallig in his childhood?

*Pupil:* His parents and brothers and sisters lived there. He watched the sheep in the fields; he learned early in life to steer a boat and it gave him pleasure to be tossed about by the waves. He hunted for mussels on the beach and caught fish. It was frightful yet beautiful when the storm raged and the high waves beat over the island.

*Teacher:* What can we understand from that?

*Pupil:* We can understand why Jasper loves his home.

*Teacher:* How does Jasper feel toward his wife and child?

*Pupil:* He loves his wife and child. He is sad because his wife is anxious about him. He would like very much to play with his child and he would be glad to see the child smile at him.

*Teacher:* Why didn't he remain at home with them?

*Pupil:* He must work as a sailor, in order to earn money. The family cannot live from stock raising and from fishing. They need money in order to buy bread, salt, potatoes, clothes, wood, and coal.

*Teacher:* How does Jasper feel when he must remain away from his family so long?

*Pupil:* He becomes very homesick and wishes to return to Hallig.

*Teacher:* Why doesn't he show this longing for a long time?

*Pupil:* Because he holds it for his duty to remain with his captain. The captain has always been very kind to him and has given him the chance to earn something.

*Teacher:* How does he behave when the longing for home becomes overpowering?

*Pupil:* He begs the captain to let him go to Hallig; only in case his wish is not granted will he run away.

*Teacher:* How great his love for Hallig and for his family is we see in the conclusion of the poem.

*Pupil:* He wishes to die at Hallig, where he passed his childhood and where his wife and child have made him happy.

*Teacher:* How does the captain show his feeling toward the sailor?

*Pupil:* The captain has learned what has happened at Hallig. He knows what love Jasper holds for his wife and child. At first he says nothing to him in order not to make him unhappy. He wishes to break the sad news to him later. When Jasper comes to him with his request, he refuses it; but when he can keep silent no longer, he prepares Jasper for the ill tidings. A bad day has come for Hallig and a tidal wave swept over the island. When Jasper hears that, he suspects something had happened and then comes the news. Your wife is dead,



your child is dead, sheep and lambs are swept away, and your house is destroyed.

*Teacher:* Why does he wish to keep Jasper with him?

*Pupil:* He hopes that the work on the ship and the trip over the ocean will drive away his sad thoughts.

#### COMPOSITION. FIRST CLASS. STEGLITZ. GIRLS

##### *What Drives Men to Foreign Lands?*

1. Introduction: Praise of homeland.
2. Treatment: Causes for leaving home are:
  - (a) Greed and desire for gold.
  - (b) Curiosity and pleasure.
  - (c) Bad conscience and sense of freedom.
  - (d) Desire for knowledge and discovery.
  - (e) Christian love and business occupations.
3. Conclusion: Never forget that you are a German.

"Smoke at home is clearer than sunshine abroad." So runs the proverb, but still there are every year many people who leave their home land. Many reasons lead people to emigrate, partly honorable reasons, partly dishonest. But the clever man knows that things **Execution** go best for him at home and says to himself: "My home, what can be better!" What the different reasons are that take men to foreign lands my essay will portray.

One often reads in the newspapers gold may be found in Alaska and California, and diamonds in Africa. Greed and lust for gold drive men into unknown lands. They believe that here they will find their fortune. In their thoughts these poor people have very much deceived themselves, for, in place of good fortune, they find misery.

On our beautifully and comfortably equipped ocean steamers we find many people full of curiosity and desire for pleasure. The rich have heard the beauties of other lands praised, and filled with curiosity, they must see the boasted countries. Those in search of pleasure wish to be freed from the regular everyday life and they pass this time in other lands. But not only these people take trips, but also the sick. This we saw in the case of Emperor Frederick, who visited the Riviera on account of his throat trouble.

If someone has committed a crime at home, then he thinks he is best

protected from his earthly judge in a foreign country. It does not suit other men to obey longer the laws of the fatherland. They go abroad and believe that here they can enjoy freedom.

But it is not always these dishonorable reasons which cause men to go into those regions. Among other reasons are the desire for knowledge and the spirit of discovery. Professor Koch passed the best years of his life in the tropical regions of Africa in order to establish the causes of the sleeping sickness. Christopher Columbus went forth in order to be able to prove that the earth is a sphere.

Out of sympathy for the heathen, missionaries go to foreign countries in order to preach Christianity to them. They expose themselves to many privations through the practice of Christian love. Business occupations take many men abroad. Great companies which establish harbors in foreign lands or build railroads send their workmen there. So these causes belong to the honorable ones.

We have now heard all that which causes men to leave their homeland. If these people remain abroad a long time and succeed, very often they deny their German heritage. In order to combat this thought the poem, *German Advice*, says, "*Du, deutsches Kind, sei tapfer, treu, und wahr.*"

Handwriting = 1	} Very good.
Content = 2	

#### COMPOSITION. FIRST CLASS GIRLS. STEGLITZ

##### *What Drives Men to Foreign Lands?*

##### Outline.

Introduction: Praise of homeland.

Treatment: Causes for leaving the homeland are:

- (a) Greed and desire for gold.
- (b) Curiosity and pleasure.
- (c) Bad conscience and sense of freedom.
- (d) Desire for knowledge and discovery.
- (e) Christian love and business.

Conclusion: Never forget that you are a German.

The home is the most beautiful place in all the world. There we pass our childhood and are surrounded by love. In the home are those who are dearest to us and by whom we are loved. No language sounds so sweet as the mother tongue. Nowhere do the church bells ring so beautifully as in the homeland, and the places where

**Execution**

we played as children remain very dear to us. We should love our home above all else. He who does not love his home is ungrateful and of poor spirit.

Still unfortunately there are many men who leave their homes. There are many causes why they leave their homes. Many think they will find their fortunes in foreign lands and emigrate. Saddest of all is it when greed and lust for gold are the causes for their deserting the homeland. How bitterly are these men often deceived. The land of gold proves to be a barren region where they often die of privation. Besides they must live together with men of all sorts, and not infrequently, someone, who really has found some gold, will be slain for the sake of his earnings. In many cases the seekers for gold return as wretched men to their homes. True is the proverb, "Remain at home and support yourself honestly."

Other men go to foreign lands for sake of pleasure, and in order to learn about other lands and peoples. These are mostly rich people. It is very fine to travel. Our ocean steamers sail in all directions and by means of the railways we can travel a great distance in a short time. Also for the sake of health many people take long journeys. They hope to be well and strong again in foreign countries, as was not possible for them at home. Our Emperor Frederick went to San Remo in order to find benefit in the warm climate for his serious illness.

A bad conscience is another reason for leaving the homeland. Criminals hope to escape justice in foreign countries. However, they are seized and are turned over to an earthly judge. In their breasts evil men carry an even more severe judge, a bad conscience, which will not let them be at peace even in the most distant lands. The desire for fuller freedom drives many a man across the ocean into the primeval forests to lead an unrestricted existence. In their lonesomeness such men no doubt often think of their dear homes.

Many men do their fatherland great service and honor when a desire for knowledge and discovery takes them to foreign lands. Thus, Columbus discovered America, Wissmann explored Africa and Sven Hedin crossed the mysterious Tibet. Many brave men sought to reach the north pole and many a one lost his life in the ice as a sacrifice to the spirit of discovery. The homeland can be proud of such heroes.

Every year many missionaries go to India, Africa, and Australia in order to preach the Gospel to the heathen. There they build schools, teach and baptize the natives. Not infrequently the missionaries are exposed to danger when the natives are particularly wild and close their heart to the

Christian life. As missionaries leave their homes in order to serve Christianity, so also great scholars, like Robert Koch and others, go into the jungles to study diseases. They benefit thereby not only their fatherland but also all mankind. Business takes the seamen to foreign lands, likewise colonists, who carry their native civilization to the colonies. They build railroads and harbors that the country may prosper on account of commerce.

As men are taken to foreign lands, so they are driven back home again. They do not always find everything as they once left it. He who remains in foreign countries must never forget how much he is indebted to his homeland. He must never forget that he is a German; he must love the German language above everything else, and maintain German manners and customs.

Handwriting = 2 } Very good.  
Content = 2 }

Corrections

These are omitted.

#### COMPOSITION. STEGLITZ. FIRST CLASS. GIRLS

##### Outline.

- I. Introduction: Praise of the homeland.
- II. Treatment: The causes for leaving the homeland are:
  - (a) Greed and lust for gold.
  - (b) Curiosity and pleasure.
  - (c) Bad conscience and sense of freedom.
  - (d) Desire for knowledge and spirit of discovery.
  - (e) Christian love and business occupations.
- III. Conclusion: Never forget that you are a German.

I. Many poets praise in their poems the beauties of the homeland. The homeland with its wonderful pine forests rejoices the heart of every man. And still there are many men, who go out into the wide world, to earn their daily bread better than they can at home. Frequently they deceive themselves badly, and are obliged to find a miserable death in a foreign land. My essay, which follows, will tell what drives men to foreign lands.

II. a. People often read in the newspapers that gold is to be found in California and Alaska. They go there to make their fortune. But this joy does not last long. Most of them return to their homes as poor,

wretched people. The little gold that they already had they spend on their journey.

II. *b.* On the stately ocean steamers we can see every day people who leave home in order to see beauties which are over there. Curiosity attracts them. Likewise pleasure contributes to causing many to travel abroad. Also many illnesses require trips to foreign shores. So it occurred to our dear Emperor Frederick who sought a cure for his throat on the Italian coast.

II. *c.* In the large city there are many dishonest men who have embezzled lots of money. In order to protect themselves from their enemies, they journey to a foreign country. To be sure they can thus escape their earthly judge, but not their heavenly judge. Many men do not wish to obey the laws. They leave their homeland and think over there to act and do as they please.

II. *d.* Desire for knowledge and the spirit of discovery are often the causes which take men into foreign lands. So it was with Columbus, who wished to show his fellow men that the earth was a sphere, and not a disc as they thought, and therefore he left his beloved country. Likewise other men go to America in order to tell us something about that country and its inhabitants.

II. *e.* Many men, called missionaries, go out into the distant lands in order to preach the Gospel to the heathen. Thereby they expose themselves to many dangers. For in Australia there live so-called cannibals, who take pleasure in killing a man and eating his flesh.

III. When we are abroad, we must not forget that we are German children. We are also not to forget our mother tongue. Also we must not ridicule anything German. We must always cherish that beautiful lyric poem which reads: "*Du deutsches Kind, sei tapfer, treu, und wahr.*"

Handwriting = 2-3

Content = 2-3

## GRAMMAR AND ORTHOGRAPHY LESSON. GIRLS. CLASS II

*Teacher:* Please write these sentences as dictation. (Reading.)

1. *Auf Regen folgt Sonnenschein.*
2. *Eine Schwalbe macht keinen Sommer.*
3. *Willst du nicht das Lämmlein hüten?*
4. *Goldene Abendsonne, wie bist du so schön.*
5. *Wer hat die schönsten Schäfchen?*

*Teacher:* Who has no mistakes (after spelling sentences out and giving the correct punctuation)? (Several — 5 — children raised their hands. Writes the following sentence on the board.) "*Die gute Grossmutter erzählt dem kinde das Märchen.*" What is the predicate?

*Pupil:* The predicate is "*erzählt dem Kinde das Märchen.*"

*Teacher:* Who tells the story?

*Pupil:* The grandmother.

*Teacher:* What is that?

*Pupil:* That is the subject.

*Teacher:* *Was* does the grandmother tell?

*Pupil:* *Das Märchen.*

*Teacher:* That is a complement and is always in the fourth case. *Wem*, to whom, is always in the third case. What are the attributes?

*Pupil:* *Gut* is an attribute to grandmother.

*Teacher:* What part do we ask first?

*Pupil:* *Who* or *what* with a verb? The answer is the subject.

*Teacher:* Are the subject and predicate sufficient?

*Pupil:* No, but they are the most important.

*Teacher:* How can you tell the subject?

*Pupil:* It is always the answer to the question "*Wer tut* or *Was tut das?*"

*Teacher:* *Wen?* or *was?* is always the fourth case if in the predicate. *Wem* is in the third case. The attribute is used to modify. Give an example.

*Pupil:* *Good* modifies *grandmother*.

*Teacher:* What kind of word is modified in this case?

*Pupil:* The noun is modified.

*Teacher:* What kind of words are attributes?

*Pupil:* Adjectives are attributes.

*Teacher:* How do we recognize an adjective?

*Pupil:* It answers the question, *Wie ist das Ding?*

*Teacher:* How do you tell the predicate?

*Pupil:* It answers the question, "What does the subject do or how is the subject?"

*Teacher:* How do you recognize the complements?

*Pupil:* The answer to *wen?* or *was?* is always in the fourth case. The answer to *wem* is always in the third case.

*Teacher:* How do you recognize an adjective?

*Pupil:* It answers the question "*wie?*"

*Teacher:* Give some examples.

*Pupil:* *Wie ist der Vater? Wie ist das Bild?*

*Teacher:* How do you write adjectives, large or small?

*Pupil:* Adjectives are written with small letters except when they begin a sentence.

*Teacher:* What question do you ask with verbs?

*Pupil:* What does the subject do?

*Teacher:* How are verbs written?

*Pupil:* Verbs are written small.

*Teacher:* What words are written large?

*Pupil:* Nouns are written large.

*Teacher:* What words denote gender?

*Pupil:* The gender words are (articles) *der, die, das*.

*Teacher:* How do you change a verb to a noun?

*Pupil:* Any verb can be used as a noun if we use *das* with it.

*Teacher:* What other kinds of words can be made into nouns?

*Pupil:* Any kind of a word can be used as a noun.

*Teacher:* How do you write nouns?

*Pupil:* Nouns are written with capital letters.

*Teacher:* What kind of a word is used before a noun?

*Pupil:* We use adjectives and articles before nouns.

*Teacher:* Name the indefinite articles.

*Pupil:* The indefinite articles are *ein, eine, ein*.

*Teacher:* What changes occur in the articles?

*Pupil:* The endings are changed. One can decline them.

*Teacher:* Decline *der Vater, die Mutter, das Kind*.

<i>Pupil:</i> <i>der Vater</i>	<i>die Mutter</i>	<i>das Kind</i>
<i>des Vaters</i>	<i>der Mutter</i>	<i>des Kind</i>
<i>dem Vater</i>	<i>der Mutter</i>	<i>dem Kinde</i>
<i>den Vater</i>	<i>die Mutter</i>	<i>das Kind</i>

*Teacher:* Give me the plural of the same words.

<i>Pupil:</i> <i>die Väter</i>	<i>die Mütter</i>	<i>die Kinder</i>
<i>der Väter</i>	<i>der Mütter</i>	<i>der Kinder</i>
<i>den Vätern</i>	<i>den Müttern</i>	<i>den Kindern</i>
<i>die Väter</i>	<i>die Mütter</i>	<i>die Kinder</i>

*Teacher:* What articles have no plural?

*Pupil:* *Ein, eine, ein* have no plural.

*Teacher:* What are some of the prepositions with the dative (third) case?

*Pupil:* Some prepositions with the third case are: *mit, nach, bei, samt, seit, von, zu, ausser, gegenüber*.

*Teacher:* Give me an example with *mit*.

*Pupil:* *Ich schneide mit dem Messer.*

*Teacher:* Give some prepositions which govern the fourth case.

*Pupil:* Some prepositions which govern the accusative are: *durch, für, um, ohne, gegen, wider.*

*Teacher:* Give an example with *durch*.

*Pupil:* *Die Soldaten zogen durch die Stadt.*

*Teacher:* Give some prepositions which may be used with either the third or fourth case.

*Pupil:* They are *hinter, auf, neben, unter, vor, zwischen, an, in, über.*

*Teacher:* What have we studied to-day?

*Pupil:* We have studied adjectives, verbs, nouns, articles and prepositions.

*Teacher:* Will you recite the poem, "*Morgengruss.*"  
(We stopped taking notes at this point.)



## CHAPTER XVII

### ARITHMETIC

ARITHMETIC, according to German educators, has two purposes. The first is to teach the children to solve problems as they occur in actual life, and the second to give them practice in clear thinking and correct speech. **Aim** The first aim is the practical one, the second the formal one. To quote from the Berlin course of study:<sup>1</sup>

Arithmetic in all sections of the school is to make clear the principles of the method employed and to lay down in hard and fast rules the knowledge so acquired. Only in this way will the pupils succeed in independently drawing and presenting the general truths previously developed. Accuracy in the use of established principles is to be gained by extensive practice. Repetition and review serve this purpose. Daily reviews are indispensable for this subject.

The following outline gives a general idea of the contents of the course in Arithmetic in the *Volksschule*:

Class 8. Numbers from 1-20.

Class 7. Numbers from 1-100; fractions in connection with the multiplication and division tables; separation of a whole into its parts and the combination of the parts into a whole; relations of value, *Mark* and *Pfennig*. Preparation for the *rule of three*. Four hours. **Course of Study**

Class 6. Numbers from 1-1000; fractions; common fractions and mixed numbers on the basis of the small numbers of the multiplication table; tables of measure, liter, hektoliter, meter, kilometer, centimeter, millimeter, gram, kilogram; rule of three. Four hours.

Class 4. Work with compound denominate numbers in tens, hundreds, etc.; fractions in connection with the work in denominate numbers in tens, hundreds, etc.; decimal fractions; rule of three. Four hours.

<sup>1</sup> *Lehrplan der Berliner Gemeindeschulen*, p. 64.

Class 3. Common and decimal fractions; proportion; calculation of simple and direct relations or terms; business arithmetic. Four hours.

Class 2. Problems in proportion dealing with indirect and compound terms; percentage; profit and loss; net weights and tare; partnership; averages; problems of transportation, railway, post, telegraph and telephone. Four hours.

Class 1. Problems of the household, city and state budget, such as state, city and church taxes; problems in hail, fire and life insurance; problems dealing with money, bills of exchange, deeds, bonds, stocks, checks and the like; square root; equations of the first degree with one unknown quantity. Four hours. (This year's course for boys.)

Class 1. Problems dealing with housekeeping; rent, furnishing the house, heat and light, clothing, provisions, budget; problems dealing with depositing money in savings banks, with mortgages, and with notes, deeds, etc.; problems dealing with fire, life, annuity and capital insurance; problems in the imperial insurance regulations; foreign money and exchange; checks; mensuration. Four hours. (For girls.)

The arithmetic in the first three years of the school limits itself to work with numbers under *one thousand*. In the first year numbers greater than *ten* are rarely ever treated at all. All the time of this year is given over to learning the numbers from *one* to *ten* in all their combinations. The children are not to count mechanically or to deal solely with abstract numbers, but they gain the number concepts through the use of natural objects, such as balls, blocks, sticks, coins, tables, hands, children, and the like. Counting-frames are also used very largely.

After the child has learned to count simple objects, he is drilled in mechanical counting of abstract numbers, but this is only done after the number concept has been thoroughly established. Before the child is allowed to count, one, two, three, and so on, he is taught the position and composition of each number. He is required to understand that *three* is composed of *two* and *one*, and of *one* and *two*, and of three *one's*. So it is with all the numbers. The pupils are

Arithmetic  
in the  
Lower Sec-  
tions

The Num-  
ber Con-  
cepts

materially aided in this work by the counting-frames. The pupils are taught to arrange the numbers on the frame always in the same way at first, in order that they may have a good mental picture of four, seven, or whatever the number may be. If they are learning the number four, they count four objects; they do four things; they play four games; they see four boys, and finally on the counting-frame, four balls, or counters, are placed in a definite position, so that the child when thinking of the number will immediately see the number as a whole and can see it equally well in its parts. Sometimes these number-pictures are arranged on cards, while at other times they may be placed on blocks. The children are taught to see a number as a whole and then in its parts. For example, the number 6 at any one given time is conceived as being made up of 5 plus 1, 4 plus 2, 3 plus 3. The following diagrams show how the numbers are often arranged on the frames to aid the pupil in gaining these mental pictures.

After each number has been thoroughly learned the children are allowed to make it on their slates and to write the processes which they have already done orally.

Counting is usually done with cubes or balls.

*Teacher:* What is 7 made up of?

*Pupils:* 7 is 6 and 1.

7 is 5 and 2.

7 is 4 and 3.

7 is 2 and 5.

7 is 1 and 6.

7 is 2 and 5, and so on.

**Examples of  
First Year  
Work. Ad-  
dition and  
Subtraction**

This shows how carefully each number is drilled, backwards and forwards, almost every day in the year. Of course, practical problems within the child's understanding are used. Numbers in this year are rarely separated into more than two parts, as 6 is 5 and 1, rather than 6 is 2 and 2 and 2. When this has

been thoroughly learned, the children add in the following manner :

1 and 1 are 2.  
2 and 1 are 3.  
3 and 1 are 4.

Then the subtraction is tried in the same way :

10 less 1 is 9.  
9 less 1 is 8.  
8 less 1 is 7, and so on.

When the addend and subtrahend *one* are thoroughly drilled, *two* and *three* are used in the same way. Later addition and subtraction in regular order is dropped and problems like the following are given :

8 and 1 equal ?  
6 less 1 equals ?  
7 and 2 equal ?  
5 less 3 equals ?

Thus far only two numbers have been added or subtracted. After addition and subtraction have been thoroughly drilled, multiplication of numbers with the product under is begun, or the addition combinations up to twenty are taken up, usually the latter processes first. The first step is to add.

10 and 1  
10 and 2  
to  
10 and 10.

After that the combinations like 11, 10, and 1 are learned.

11 and 1  
to  
19 and 1

It goes without saying that the combinations are always made with concrete objects first. As soon as possible abstract drill work is commenced. The next step is subtraction:

20 less 1	Then 10 and 2
19 less 1	10 and 9
to	14 and 1
11 less 1	19 less 1
and finally	10 and 5
	10 and 8
	17 less 1

At last the addend to a larger number than ten is increased as in 11 and 2, 15 and 3, 17 and 2, 11 and 9, and then subtraction of 20 less 7, 19 less 7, 18 less 5, and so on. These combinations become absolutely automatic, and one never finds children in the second year who hesitate at immediate recognition of these combinations. Teachers have told me that the entire success of the work in arithmetic depends on speed and accuracy in the fundamental addition and subtraction facts of the first year and to some extent those of the second. The next step is mixed problems in addition and subtraction as: 14 less 3, 17 and 5, 19 less 8, etc. This goes over to

20 equals 19 and ?	18 and ? equal 19.
16 equals 13 and ? and	13 and ? equal 20.
15 equals 12 and ?	11 and ? equal 19.

These are frequently made the basis of real problems from within the child's experience.

When the point has been reached, the teacher goes back to 9 and ? equal 10, 7 and ? equal 10, 6 and ? equal 10, and 16 and ? equal 20, etc.

Then comes

9 and 3 equal ? to which the answer is 9 and 3 equal 12.	
9 and ? equal 10.	9 and 1 equal 10.
10 and ? equal 12.	10 and 2 equal 12.
9 and 3 equal ?	9 and 3 equal 12.

In additions going over ten the number is completed to ten and the remainder of the addend is added to 10. Subtraction goes in the same way: 13 less 6 equals 7. 13 less 3 equals 10. 10 less 3 equals 7. Hence, 13 less 6 equals 7. This method is continued until there is no further necessity. One finds the same plan in the higher classes in subtracting numbers like 150 from 875; as: 875 less 100 equals 775; 775 less 50 equals 725.

A table like the following is used for drill in some schools!

11 is 10	9	8	7	6	5	4	3	2	1 plus ?
12 is 10	9	8	7	6	5	4	3	2	plus ?
13 is 10	9	8	7	6	5	4	3	plus ?	
14 is 10	9	8	7	6	5	4	plus ?		
15 is 10	9	8	7	6	5	plus ?			
16 is 10	9	8	7	6	plus ?				
17 is 10	9	8	7	plus ?					
18 is 10	9	8	plus ?						
19 is 10	9	plus ?							
20 is 10	plus ?								

Very little of the work is written. One or two children work at the board each day.

The work begins in multiplication with

1 and 1 equal ?	2 times 1 equals ?
2 and 2 equal ?	2 times 2 equals ?

**Multiplication**

Then how many shoes are 2 pairs? How many feet have 3, 4, 5, 10 sparrows? How many marks are 2 three-mark pieces? 4 three-mark pieces? etc. How many legs have 3 horses? 5 horses? One post-card costs 5 pfennigs. How much do 2, 3, 4, 5 cards cost? One egg costs 6 pfennigs. How much do 1, 2, 3 eggs cost?

After this work comes division. How many one-pfennig pieces can you get if you have a 2 pfennig piece? How many pairs of stockings can you obtain from 2, 4, 6, 8, 10 stockings? How often is 2 contained in 2, 4, 6, 8, 10, 16, 20?

Then with charts fractions are begun, but only in simple form. What is the half of two? The half of ten? The third of 6? The fourth part of 8? What is the sixth part of 12? Of 18? What is the fifth part of 20, 10, 15? Then the exercises and problems as follows:

2 divided by 2;	12 divided by 2; etc.
18 divided by 3;	12 divided by 3; etc.
16 divided by 4;	8 divided by 4; etc.
15 divided by 5;	10 divided by 5; etc.
6 divided by 6;	12 divided by 6; etc.

A dozen apples are divided among 2, 4, 6 children. How many apples does each child receive?

Such in general is the work of the first year. Numbers beyond twenty are seldom touched upon. When one considers that four hours each week for forty weeks are given to the numbers under twenty, and that a half of the work is drill and practically all oral, there is small wonder that the children know their number-work thoroughly.

The number space from 1 to 100 is treated during this year. The relation between tens and units comes first. 10 units equal 1 ten; 50 units equal 5 tens; etc. 1 ten equals 10 units; 4 tens equal 40 units. Then come problems in addition. 4 tens and 2 units equal 42 units. Further along we find problems like 94 equals 9 tens and 4 units; 40 and 8 equal ?; 28 equals ?; 28 equals 20 and 8; 59 less 9 equals ?; 74 less 4 equals ? Counting frames are used for this work until the pupils are ready to go over to abstract problems. Practical problems are also introduced. The next step is to name the multiple of ten above 25, 19, 66, 24, 37, and the like. Immediately after that, to add enough to the following numbers to make the next higher multiple of tens, as, 25 and 5 equal 30; 33 and ? equal 40; and then the children will name the next higher multiple of ten and say how much less the given number

is, as, 40 less 6 equals ? 30 less 3 equals ?. A great many such problems are solved and the children acquire facility therein. One can easily recognize the value of these and the following exercises for oral arithmetic.

The next step is the addition of one-place numbers to any number of two figures :

21 and 2 equal	43 and 2 equal	38 and 2 equal	65 and 2 equal
31 and 2 equal	53 and 2 equal	98 and 2 equal	75 and 2 equal
41 and 2 equal	63 and 2 equal	68 and 2 equal	35 and 2 equal
71 and 2 equal	93 and 2 equal	48 and 2 equal	55 and 2 equal

When this is learned, they count by one-place numbers up and down to 100. For example, 21 and 2 equal 23; 23 and 2 equal 25; 25 and 2 equal 27, as far as 100, and then backwards. The addends and subtrahends as large as 9 are used in this way. Literally thousands of such problems are given during this year.

All the numbers up to 9 are next treated as follows :

4 and 4 equal 8, counting up and down by 4's. 1 times 4 is 4 and up to 10 times 8 is 80. 16 divided by 4 is ?;  $\frac{1}{4}$  of 32;  $\frac{1}{4}$  of 16;  $\frac{1}{4}$  of 40. Then comes 2 times 4 less 5 is 3; 8 times 3 less 5 is ?.

The practical problems in this part of the work are as follows :

Fritz has 4 times 9 Pf., Otto has 7 times 9 Pf. How many more pfennigs has Otto than Fritz? If one meter of goods costs 6 M., how much do 9 meters cost?

At the close of the exercises with the one-place operative number, the following type of work is begun :

- 9 equals 4 times 2 and 1. 13 divided by 2 equals 6, rem. 1.
- 17 equals ? times ? and ?
- 4 equals 1 times 3 and 1. The third part of 11 equals 3, rem. 2.
- 16 equals ? times ? and ?. The third part of 29 equals ?, rem. ?.

In the second half of this year's work a two-place operative number is used. The beginning is made with multiple of ten, as follows :



10 and 10 equal 20	90 less 10 equals ?	1 times 10 equals 10
10 and 20 equal ?	80 less 10 equals ?	2 times 10 equals ?
to	to	to
10 and 90 equal ?	20 less 10 equals ?	10 times 10 equals ?

Problems are as follows. Some one owes 70 M. How many 10 M. pieces are necessary to pay the debt?

Then follow problems like these:

20 and 20 equal ?	10 and 30 equal ?	60 less 30 equals ?
20 and 60 equal ?	10 and 40 equal ?	60 less 40 equals ?
	60 divided by 3 equals ?	
	60 divided by 2 equals ?	
	20 is how much less than 70?	
	60 is how much less than 90?	

Otto has 20 pens and 40 pens; Karl has 30 pens. How many more has Otto than Karl; and how many have they together?

In the last part of the year the following types of problem form the basis of the work:

(a) Multiples of tens are added to multiples with digits in units' places.

Ex. 82 and 10 equal ?      45 less 10 equals ?      33 and 50 equal ?  
 45 and 10 equal ?      39 less 10 equals ?      99 less 70 equals ?

(b) Multiples of ten with digits in units' places are added to multiples of ten.

(c) These same kinds of numbers are subtracted.

(d) Multiples of ten are multiplied and divided by units.

(e) Multiples of ten with digits in units' place are added to and subtracted from similar numbers.

45 and 18 equal ?    43 and 35 equal ?    99 less 27 equals 72.

36 and 18 equal ?    62 and 35 equal ?    72 and 19 equal ?

(f) Multiples of ten with digits in units' place are multiplied by units and the products are increased or decreased by two-place figures.

2 times 19 less 18 equals ?	2 times 45 less 27 equals ?
2 times 24 less 18 equals ?	2 times 39 less 27 equals ?
2 times 43 less 18 equals ?	3 times 27 less 19 equals ?

It is interesting to note here that even as low as the second grade the multiplication of larger numbers by one-place figures

is commenced. One sees here the basis of good oral arithmetic. The multiplication table up to 10 times 10 is learned in this grade.

(g) Division of two-place numbers by units including 9.

98 divided by 8 equals 12, rem. ?

89 divided by 8 equals ?, rem. ?

The following types of problems are solved by the children at the close of the year :

(1) A family consists of six persons. Each eats two rolls a day. How many rolls does the family eat in a week? How much is spent for rolls each week if four rolls cost 10 Pf.?

(2) 3 boys divide a number of plums. Each receives 18. How many plums did they have all together?

The work of the third year deals with the number space from 100 to 1000. The exercises are practically all oral, except in the latter part of the year.

Addition and subtraction of numbers between 100 and 1000, as well as the multiplication and division of these numbers by figures of two places, are carried on in exactly the same way as in case of the numbers below 100. The beginning of denominate numbers is made in this grade in a formal way in that the drills in addition and the other processes deal with meters, millimeters, grams, liters, and the like. One is surprised to see the facility with which the third-grade children handled difficult problems, of which we give some examples.

240 mm. and 80 mm. equal ?

400 mm. and 600 mm. equal ?

How much is 4 times 60 and 30?

How much is 7 times 80 and 50?

How much is 8 times 90 and 60?

9 M. equals ? Pf.

The third part of 150, 210, 24 equals ?

420 equals 60 times ? 640 equals 80 times ?

540 equals 60 times ? 800 equals 80 times ?

600 equals 60 times ? 720 equals 80 times ?

$\frac{1}{2}$ ,  $\frac{1}{3}$ ,  $\frac{1}{4}$ ,  $\frac{1}{6}$ ,  $\frac{1}{10}$ ,  $\frac{1}{20}$ ,  $\frac{1}{50}$  of a mark equals ?

$\frac{8}{10}$ ,  $\frac{9}{10}$  of a mark equals ?

7 M. 19 Pf. equals ? Pf.

7592 and 70 equal ?

5 times 65 equals ?

695 less 122 equals ?

The solution of 5 times 65 is as follows :

5 times 65 equals ?

5 times 60 equals 300.

5 times 5 equals 25.

300 and 25 equal 325.

The solution of 645 and 125 is as follows :

645 and 125 equal ?

645 and 100 equal 745.

745 and 20 equal 765.

765 and 5 equal 770.

These problems are always solved orally. Later a problem like this one is solved.

$\frac{1}{5}$  of 291 equals ?

$\frac{1}{5}$  of 200 equals 40.

$\frac{1}{5}$  of 90 equals 18.

40 and 18 equal 58.

$\frac{1}{5}$  of 291 equals 58, rem. 1.

The stenographic reports suffice for explanation of the methods in the remaining years of the *Volksschule*. We wish now to call attention to some of the valuable features of the arithmetic work.

The most important lesson taught by the method in arithmetic in the *Volksschule* is that of oral arithmetic. The children acquire an almost unbelievable facility in solving difficult problems without the aid of written figures. Oral Arithmetic  
Unending drill with actual problems is the secret of the success of

this work. First of all the process is explained, a step at a time. Each step is drilled and finally the complete process. A child is never allowed to stumble around uncertain as to what is to be done. The drills are usually short and very rapid. The practical applications follow. Fully three fourths of the time in arithmetic is spent in oral work. American teachers must come to learn that a very large part of the problems that are required written in our schools could be done just as well orally, and many of those that cannot be done orally are entirely unnecessary and useless.

The German teacher does not depend upon the text-book to teach the children the arithmetical processes. In fact the book contains no rules or explanations in regard to how problems shall be solved. All the development work and most of the drill work is done in school. In taking up a new topic, for example, percentage, the teacher assigns no home work at all, but begins the hour with the first step in the development of the topic, and in this way knows that each child understands what is being done because all are given opportunity to solve problems involving this first operation. Usually the teacher solves a problem on the board by way of illustration and then asks several children to solve similar problems, requiring each to explain what he has done. The class in this way has ample opportunity to see what is expected and how every step is performed. German teachers will tell you that as far as they are concerned they do not care whether the children ever do any home work in arithmetic, but they do believe in work, rather than recitation, in the school-room.

The German child after the third year usually has written work two or three times a week to prepare at home and to put  
**Written**        into a notebook. The examples are taken from  
**Work**        the problem-book, which contains no explanations or rules. The number of problems require about fifteen or twenty

minutes' preparation. The blackboard work is different from that in America. There is room for only one child, so while this child solves a problem, all the others watch for errors and for the purpose of acquiring the method. Then all the children solve a few examples at their seats. In all, the written work at school does not claim more than one fourth of the time.

The practical problems in the course are excellent. Every problem lies within the experience of the child. The conditions of the problem correspond to actual conditions. The price of every article mentioned is the price as the child knows it, not a fictitious price. One never hears problems which ask how many steps a man takes in walking ten kilometers. Nobody wants to know that. The majority of problems deal with wages, expenses of families, cost of food and clothing, insurance, railway fare, taxes, express, telephone and telegraph rates, rebate, interest, mortgages. The children themselves furnish a large part of the problems. The course of study already quoted gives more detail in reference to the topics taught.

The course is intensely practical in that a great many portions of arithmetic as taught in Germany are omitted. Multipliers and divisors of more than three places are very seldom used. Fractions are limited to those in common use. For example,  $\frac{3}{1891}$ ,  $\frac{4}{891}$ , and the like seldom are permitted. Square root, cube root, partial payments, compound proportion, stocks and bonds, and other similar topics do not appear in the course of study.

Arithmetic is correlated wherever possible. The problems in arithmetic are taken from almost every province of life. Dates in history give opportunity in reckoning days, months, and years; travel and geography furnish problems dealing with the purchase of railway tickets; in cooking and serving are examples to find the cost of materials and supplies. The correlation brought out in the insurance system and other

Subject  
Matter

Important  
Omissions

Correlation

economic problems is particularly close. The topic of insurance belongs in the history and civil government course, and there it receives a thorough explanation. However, it is vitalized in arithmetic by a great number of problems dealing with the various forms of insurance common among the lower classes of people. How taking out insurance is really done, how premiums are paid, and how profits are collected all enter into the problems and furnish a great deal of useful information.

Taking everything into consideration, the arithmetic in the German schools is admirably done. It may be that the children are not allowed much freedom in organization of subject matter, but they most assuredly learn the four fundamental operations, and to solve the problems which actually come up in their lives. We cannot recall a single topic which they learn in arithmetic that does not find frequent use in the home, the shop, or in business.

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#### GEOMETRY

The number of hours given to geometry in the *Volksschule* varies somewhat with the number of grades in the school and even with cities. In Berlin the boys' schools begin  
**Hours** geometry in the fifth year with one hour a week, while during the remaining three years the subject receives two hours each week. The girls' schools have only one hour each week during the last two years. In Hannover the boys have two hours geometry a week the last three years, while the girls have some geometrical solutions the last two years in connection with their arithmetic work.

Geometry of the *Volksschule*, to all serious intents and purposes, is very similar to mensuration in our schools, that is, mensuration of lines, surfaces, and solids. The course of study in Hannover is more typical of the German school than is the Berlin course.<sup>1</sup>

## SIXTH YEAR (BOYS)

1. Fundamental geometrical conceptions: solids, surfaces, lines, angles, points.
2. The straight line and linear measure.
3. Angles; measurement of angles.
4. The triangle.
5. The quadrilateral.
6. Lines and angles in the circle.
7. Surface — mensuration of surfaces.
8. Measurement and reckoning of the quadrilateral and triangle.
9. Volume.
10. Mensuration of the cube and prism.

## SEVENTH YEAR

1. Congruence of triangles.
2. The most important propositions dealing with angles, sides and diagonals of the parallelogram.
3. The Pythagorean proposition.
4. Study of area of straight-line figures.
5. Circumference and area of the circle and ellipse.
6. Mensuration of the cube, the prism, the cylinder, pyramids, the sphere, and the cone.

## EIGHTH YEAR

1. Review of sixth and seventh years' work.
2. The trapezium and the trapezoid.
3. The regular polygon.
4. Tangents and angles within and without the circle.
5. Proportion of distance; similarity of plane figures; reduced scales.
6. Circumference, area, sector, and segment of the circle.
7. Truncated cones and pyramids.

<sup>1</sup> *Lehrplan für die Bürgerschulen der . . . Stadt Hannover*, 1913.

## SEVENTH YEAR (GIRLS)

1. Linear and square measure.
  2. The quadrilateral.
  3. The triangle.
  4. The circle.
  5. Volume.
  6. The prism.
  7. The cylinder.
- All of these are treated in the arithmetic hour.

## EIGHTH YEAR

1. Review of the work of the seventh year.
2. Mensuration of the parallelogram and the triangle.
3. Surface area and volume of the cube and the prism.
4. Mensuration of straight-line surfaces.
5. Area and circumference of the circle.
6. Volume of simple solids.

The course in Berlin is somewhat more extensive than the one here given, but the majority of schools, including  
**Methods** the rural schools, have even less geometry than is here indicated.

The children have no texts at all in geometry. The apparatus is that which is commonly used in geometry classes in this country, the cubes, prisms, circles made up of triangles to show the method for finding the area, spheres, and the like. With regard to teaching material the teacher takes most of the geometrical figures in their setting in actual life, the schoolroom, the building, the playground, and so on. If the teacher wants a rectangle, the boys find it in the ceiling; if he wants a triangle, they find it at the window; if he wants a prism, they take a box; and so on in every topic. When the children find areas of squares or parallelograms, it is always the area of a real square or parallelogram which the children can see that is measured. No hypothetical areas are measured. The angles, lines, and surfaces discussed are always under the immediate observation of the eye.



Almost without exception, where the children are calculating the area of a surface, a child is required to run his hand along the boundaries of the surface to be sure that he and the others really know what is being measured.

Rigid proofs are not insisted on in every case, and very rarely in girls' schools. The propositions proven are only the easiest ones from plane and solid geometry. Practical knowledge and application are much more the aim of this work than formal mental improvement.

The work in geometry is closely correlated with that in drawing. Children are required to draw to a scale the surfaces measured and described.

One very valuable feature of all geometrical and arithmetical study in the *Volksschule* is the great amount of training given to judging offhand the area, dimensions, and volume of all sorts of geometrical surfaces and solids. On the wall of every schoolroom is painted the meter, the square meter, and sometimes the cubic meter. One is often surprised at the accuracy of the children's judgment in the matter of judging length and volume. Most of the children can tell to within a few centimeters the length of almost any line under ten meters. The same accuracy is attained in judging volume, weight, and time. In order to test the accuracy of this offhand judging, the actual measurement is made from time to time, but not enough to injure the child's confidence in his own judgment.

In every grade the attempt is made to make objective the relation of numbers by means of lines, volumes, or areas. This is particularly valuable to the children in teaching fractions and almost any topic in percentage and is used almost universally by German teachers.

The stenographic lesson in this chapter illustrates sufficiently the actual class procedure.

The valuable lesson of the geometry in the *Volksschule* is the close relation made between the geometry of theory and the geometry of everyday life. The children can really use every geometrical fact learned in the school — and that rather frequently. The girls are given only that which they need. Abstract proofs and hypothetical figures and propositions find no place at all in the elementary school. On the other hand, some geometrical facts are necessary for everybody and too frequently these are omitted from our courses of study.

## ARITHMETIC. FIRST YEAR. BOYS

(The class had been in school ten weeks.)

*Teacher:* Count to ten. Use the counting-frame.

(The counting-frame consisted of two wooden uprights, between which ten wire rods were stretched. On each rod were ten wooden balls, some red and some green.)

*Pupil:* *Counting to ten as he shoves a ball for each number from left to right*  
One, two, three. . . . ten.

*Teacher:* A man has six birds. He sells four. How many has he left?

*Pupil:* He has two left.

*Teacher:* Give all the combinations of 7.

*Pupil:* *Counting with the balls.* 1 and 6 are 7. 2 and 5 are 7.

*Teacher:* Another boy.

*Pupil:* 1 and 6 are 7. 2 and 5 are 7. 3 and 4 are 7. 4 and 3 are 7.  
5 and 2 are 7. 6 and 1 are 7.

*Teacher:* Count the days of the week.

*Pupil:* Monday, 1; Tuesday, 2; Wednesday, 3; Thursday, 4; Friday, 5; Saturday, 6; Sunday, 7.

*Teacher:* How many days in a week?

*Pupil:* There are 7 days in a week.

*Teacher:* Sunday and Monday have passed. How many days of the week remain?

*Pupil:* 7 less 2 is 5.

*Teacher:* 9 less 1 is how many? *Indicating on the frame.*

*Pupil:* 9 less 1 is 8.

*Teacher:* 8 less 1 is how many?

*Pupil:* 8 less 1 is 7.

*Teacher:* 7 less 1 is how many?

*Pupil:* 7 less 1 is 6.

*Teacher:* 6 less 1 is how many?

*Pupil:* 6 less 1 is 5.

*Teacher:* 5 and 1 are how many?

*Pupil:* 5 and 1 are 6. (In each case the child indicated the addition on the counting-frame.)

*Teacher:* 6 and 1 are how many?

*Pupil:* 6 and 1 are 7.

*Teacher:* 7 and 1 are how many?

*Pupil:* 7 and 1 are 8.

*Teacher:* 8 and 1 are how many?

*Pupil:* 8 and 1 are 9.

*Teacher:* 9 and 1 are how many?

*Pupil:* 9 and 1 are 10.

*Teacher:* We shall now count by 2's to ten on the frame. 2, 4, 6, 8, 10.

Repeat that.

*Pupil:* 2, 4, 6, 8, 10. (Indicated all addition.)

*Teacher:* Count down from 10 by 2's.

*Pupil:* 10, 8, 6 . . .

*Pupil:* 10, 8, 6, 4, 2, 0.

*Teacher:* (Writing while a pupil indicated the subtraction on the frame, and gave the results.)

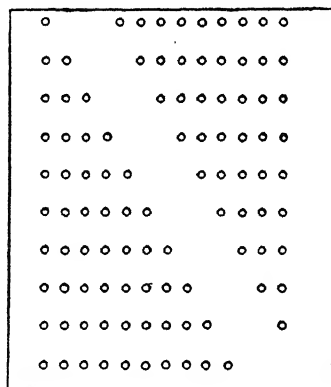
$8-2=6$	$10-3=7$
$6-2=4$	$10-4=6$
$10-2=8$	$10-5=5$
$6-2=4$	$10-6=4$
$4-2=2$	$10-7=3$
$10-1=9$	$10-8=2$
$10-2=8$	$10-9=1$

*Teacher:* A boy had ten cherries. He ate three. How many had he left?

*Pupil:* He had 7 left.  $10-3=7$ .

(This drill work was repeated six times.)

The teacher made all the addition combinations up to 10, using the frame. The children did all the work.



After that had been finished, the teacher wrote a number of problems on the board for the pupils to solve on slates.

$$10 = 5 + ?$$

$$10 = 4 + ?$$

$$10 = 7 + ?$$

$$10 = 1 + ?$$

$$10 = 9 + ?$$

$$10 = 6 + ?$$

$$10 = 3 + ?$$

$$10 = 8 + ?$$

$$10 = 2 + ?$$

$$10 = 7 + ?$$

CLASS VII a. HANNOVER. ARITHMETIC. 37 GIRLS. AGE 6-7

(The children counted with wooden sticks, laying the base number — in this case “9” — first and adding the required number to it. The lesson dealt with “9” and its combinations, as  $9 + 1$ ,  $9 + 2$ , etc.)

*Teacher:* Without the sticks, — How many are  $9 + 1$ ?

*Pupil:* 9 and 1 are 10.

*Teacher:* 8 and 2?

*Pupil:* 8 and 2 are 10.

*Teacher:* 6 and 4?

*Pupil:* 6 and 4 are 10.

*Teacher:* 3 and 7?

*Pupil:* 3 and 7 are 10.

*Teacher:* 5 and 5?

*Pupil:* 5 and 5 are 10.

*Teacher:* 2 and 8?

*Pupil:* 2 and 8 are 10.

*Teacher:* 4 and 6?

*Pupil:* 4 and 6 are 10.

*Teacher:* Now count with the sticks. How many are 9 and 3? (The pupils always keep 9 sticks down in one row, then add enough (1) to make 10, and lay the remainder of the given number in the next row.)

*Pupil:* 9 and 1 are 10. 10 and 2 are 12. Therefore, 9 and 3 are 12.

*Teacher:* How many are 9 and 5?

*Pupil:* 9 and 5? 9 and 1 are 10. 10 and 4 are 14. Therefore, 9 and 5 are 14.

*Teacher:* 9 and 6?

*Pupil:* 9 and 1 are 10. 10 and 4 are 14 . . .

*Teacher:* No, that is wrong. How many have you in your hand after laying 1 in the first row?

*Pupil:* Five.

*Teacher:* Well, then!

*Pupil:* 10 and 5 are 15. Therefore, 9 and 6 are 15.

*Teacher:* 9 and 7?

*Pupil:* 9 and 1 are 10. 10 and 6 are 16. Therefore, 9 and 7 are 16.

*Teacher:* 9 and 9?

*Pupil:* 9 and 1 are 10. 10 and 8 are 18. Therefore, 9 and 9 are 18.

(The answers given were with one exception correct, but the other results did not come as readily as the report would indicate. The pupils talked slowly, and laid the sticks carefully before giving their replies.)

*Teacher:* Now we shall add without the sticks. How many are 10 and 3? Give merely the result.

*Pupil:* Thirteen.

*Teacher:* 10 and 4?

*Pupil:* Fourteen.

*Teacher:* 10 and 8?

*Pupil:* Eighteen.

*Teacher:* 10 and 7?

*Pupil:* Seventeen.

*Teacher:* 10 and 2?

*Pupil:* Twelve.

*Teacher:* 9 and 7? Solve aloud.

*Pupil:* 9 and 1 are 10. 10 and 5 . . .

*Teacher:* No.

*Pupil:* 9 and 1 are 10. 10 and 6 are 16. Therefore, 9 and 7 are 16.

*Teacher:* 9 and 5?

*Pupil:* Fourteen.

*Teacher:* 9 and 8?

*Pupil:* Seventeen.

*Teacher:* 9 and 6?

*Pupil:* Fifteen.

*Teacher:* 8 and 3? Solve aloud.

*Pupil:* 8 and 2 are 10. 10 and 1 are 11. Therefore, 8 and 3 are 11.

### CLASS III. SIXTH YEAR

*Teacher:* The aim of the lesson is to see how after an unequal division we calculate the remainder as a fraction of the whole number. A father divides a dozen pencils among his three children. He gives Alfred  $\frac{1}{2}$  dozen, Bertha  $\frac{1}{3}$  dozen, and Konrad the remainder. What fractional part of a dozen does Konrad receive?

*Pupil:*  $\frac{1}{2}$  dozen +  $\frac{1}{3}$  dozen = 6 pieces + 4 pieces = 10 pieces.

1 dozen - 10 pieces = 2 pieces, the remainder.

2 pieces =  $\frac{1}{6}$  dozen.  $\therefore$  The remainder is  $\frac{1}{6}$  dozen.

*Teacher:* How was the dozen divided?

*Pupil:*  $\frac{1}{2} + \frac{1}{3} + \frac{1}{6}$ .

*Teacher:* How is that unequal division?

*Pupil:*  $\frac{6}{12}$  dozen +  $\frac{4}{12}$  dozen +  $\frac{2}{12}$  dozen = 6 pieces + 4 pieces + 2 pieces.

*Teacher:* How many did Alfred and Bertha receive together?

*Pupil:* They received 6 pieces + 4 pieces, as dozens:  $\frac{6}{12} + \frac{4}{12} = \frac{10}{12} = \frac{5}{6}$  dozen.

*Teacher:* What fractional part of a dozen did Bertha and Konrad receive together?

*Pupil:* They received  $\frac{1}{3} + \frac{1}{6} = 4$  pieces + 2 pieces = 6 pieces =  $\frac{1}{2}$  dozen.

(As will have already been noted, such statements as  $\frac{1}{3} + \frac{1}{6} = 4$  pieces + 2 pieces = 6 pieces are incorrect.)

*Teacher:* What fractional part greater is  $\frac{1}{2}$  dozen than  $\frac{1}{3}$  dozen?

*Pupil:*  $\frac{1}{2}$  dozen =  $\frac{1}{3}$  dozen +  $\frac{1}{6}$  dozen, so  $\frac{1}{2}$  dozen is  $\frac{1}{6}$  dozen greater than  $\frac{1}{3}$  dozen.

In twelfths of a dozen:  $\frac{6}{12} = \frac{4}{12} + \frac{2}{12}$ , thus  $\frac{6}{12}$  is  $\frac{2}{12}$  greater than  $\frac{4}{12}$ .

*Teacher:* How did we find the unknown remainder?

*Pupil:* We reduced the dissimilar fractions to a lower order, added them and subtracted them from a dozen.

*Teacher:* How do we determine the remainder as a fractional part of a dozen?

*Pupil:* 2 pieces are a sixth part ( $\frac{1}{6}$ ) of 12 pieces.

*Teacher:* How do we determine the remainder, when we express the units of a lower order immediately as fractional parts of a dozen?

*Pupil:* We change  $\frac{1}{2} + \frac{1}{3}$  dozen into twelfths of a dozen, add them, then subtract them from a whole dozen, which we express as  $1\frac{1}{2}$  dozen.

*Teacher:* Which figures do we add in the addition of  $1\frac{1}{2}$  and  $1\frac{1}{3}$ ?

*Pupil:* We add the 6 and 4, the numerators.

*Teacher:* What figures do we subtract when we subtract  $1\frac{1}{2}$  from  $1\frac{1}{3}$ ?

*Pupil:* We subtract 10 from 12.

*Teacher:* How do we add  $\frac{1}{2} + \frac{1}{3} + \frac{1}{6}$  dozen as fractional parts of a dozen?

*Pupil:* We reduce the fractions to a common denominator and then add the numerators.

*Teacher:* In what ways only can we compare  $\frac{1}{2}$  dozen and  $\frac{1}{3}$  dozen?

*Pupil:* We can compare  $\frac{1}{2}$  dozen and  $\frac{1}{3}$  dozen by changing them to units of a lower order or to twelfths of a dozen.

*Teacher:* If I give one boy  $\frac{1}{3}$  dozen apples, and another  $\frac{1}{4}$  dozen apples, what will the remainder be, if I had only one dozen apples?

*Pupil:*  $\frac{1}{3}$  dozen +  $\frac{1}{4}$  dozen = 4 pieces + 3 pieces = 7 pieces.

1 dozen - 7 pieces = 5 pieces, the remainder.

5 pieces =  $\frac{5}{12}$  dozen. Therefore, the remainder was  $\frac{5}{12}$  dozen apples.

*Teacher:* Why cannot a dozen be divided into  $\frac{5}{8}$  and  $\frac{3}{8}$  parts?

*Pupil:* Because  $\frac{5}{8}$  dozen +  $\frac{3}{8}$  dozen equals more than a dozen.

*Teacher:* What remainder shall I have, if I give away  $\frac{1}{2}$  and  $\frac{1}{6}$  of a *Shock* of pears? (*Shock* = 60.)

*Pupil:*  $\frac{1}{2}$  Sh. +  $\frac{1}{6}$  Sh. = 12 pieces + 10 pieces = 22 pieces.

22 pieces taken from 60 pieces = 38 pieces.

38 pieces =  $\frac{19}{3}$ . Therefore, the remainder is  $\frac{19}{3}$  *Shock*.

*Teacher:* A daily paper is subscribed for by three families in common.

A pays  $\frac{2}{3}$ , B  $\frac{1}{4}$ , C the remainder of the subscription. What part has C to pay? We think that such fractions are made of the price that we can take out fourths and fifths. With what fractional parts is that possible?

*Pupil:* With twentieths, fortieths, sixtieths, etc.

*Teacher:* We'll take the smallest fraction. How can we subtract fourths and fifths from twentieths?

*Pupil:*  $\frac{1}{5} = \frac{4}{20}$ , and  $\frac{1}{4} = \frac{5}{20}$ .

*Teacher:* What fractional part then do A and B pay together?

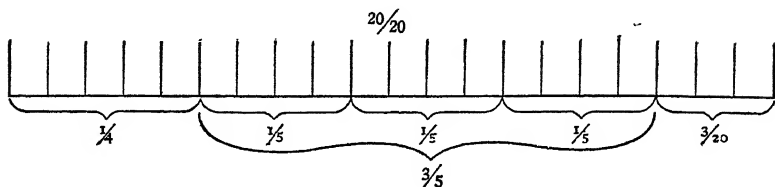
*Pupil:* They pay  $\frac{2}{3} + \frac{1}{4} = \frac{10}{12} + \frac{3}{12} = \frac{13}{12}$ .

*Teacher:* What is the remainder? What do we add to  $\frac{13}{12}$  to get  $\frac{20}{12}$ ?

*Pupil:*  $\frac{17}{20} + \frac{3}{20} = \frac{20}{20}$ .  $\frac{3}{20}$  is the remainder.

*Teacher:* What fractional part more does A pay than B?

*Pupil:*  $\frac{2}{5} - \frac{1}{4} = \frac{12}{20} - \frac{5}{20} = \frac{7}{20}$ . A pays  $\frac{7}{20}$  more than B.



*Teacher:* How do we add  $\frac{3}{5}$  and  $\frac{1}{4}$ ?

*Pupil:* We change the fractions to twentieths and add the numerators of the new fractions.

*Teacher:* Into what other denominations could we have reduced these fractions?

*Pupil:* We could have reduced them to fortieths, sixtieths, eightieths, and hundredths.

*Teacher:* Why did we select twentieths?

*Pupil:* Because it was the smallest.

*Teacher:* How do we find the remainder?

*Pupil:* We think of the sum required to make up  $\frac{17}{20}$  to  $\frac{20}{20}$  or one whole (1).

*Teacher:* How do we compare  $\frac{2}{5}$  and  $\frac{1}{4}$ ?

*Pupil:* We change them into twentieths and subtract one from the other to find how much larger one is than the other.

*Teacher:* Three persons buy some coal together. A pays for  $\frac{1}{4}$  of it, B pays for  $\frac{3}{5}$  of it, and C for the remainder. For what does C pay?

*Pupil:* A and B pay for the sum of  $\frac{1}{4} + \frac{3}{5} = \frac{17}{20}$  . . .

*Teacher:* 48 is not the least common denominator.

*Pupil:* A and B together pay for  $\frac{1}{4} + \frac{3}{5} = \frac{5}{20} + \frac{12}{20} = \frac{17}{20}$  of the coal.

C pays for the remainder,  $\frac{17}{20} + \frac{3}{20} = \frac{20}{20}$ .

C pays for  $\frac{3}{20}$  of the coal.

*Teacher:* How do we find the remainder when we have to take the sum of such fractions as  $\frac{1}{2} + \frac{1}{3}$ ,  $\frac{1}{4} + \frac{1}{5}$ ,  $\frac{1}{2} + \frac{1}{3}$  and the like from a whole (1)?

*Pupil:* We always think of the whole being divided into fractional parts, to which denomination the fractions treated can be reduced so that we can add and subtract them.

*Teacher:* Give an example.

*Pupil:*  $\frac{1}{2} + \frac{1}{3}$  to find the remainder when the sum is subtracted from a



whole. We think of a whole as divided into fifteen (15) equal parts, because we can change  $\frac{1}{3}$  and  $\frac{1}{5}$  to fifteenths.

*Teacher:* What do we do when we have to deal with dissimilar fractions?

*Pupil:* We make them similar.

*Teacher:* The new denominator, which gives both dissimilar fractions, is called the common denominator.

How do we find the least common denominator?

Let us see how we do that. What is the common denominator of  $\frac{1}{2}$  and  $\frac{1}{4}$ ?

*Pupil:* 4.

*Teacher:* Of  $\frac{1}{2}$  and  $\frac{1}{6}$ ?

*Pupil:* 6.

*Teacher:* Of  $\frac{1}{2}$  and  $\frac{1}{3}$ ?

*Pupil:* 8.

*Teacher:* Of  $\frac{1}{3}$  and  $\frac{1}{6}$ ?

*Pupil:* 6.

*Teacher:* Of  $\frac{1}{3}$  and  $\frac{1}{3}$ ?

*Pupil:* 9.

*Teacher:* Of  $\frac{1}{4}$  and  $\frac{1}{8}$ ?

*Pupil:* 8.

*Teacher:* Of  $\frac{1}{4}$  and  $\frac{1}{12}$ ?

*Pupil:* 12.

*Teacher:* You see the common denominator falls in the arithmetical series of the lesser of the two fractions, as 2, 4; 2, 4, 6; 2, 4, 6, 8; 3, 6; 3, 6, 9. In all these examples the larger of the two denominators could be the common denominator.

*Teacher:* What is the common denominator of  $\frac{1}{2}$  and  $\frac{1}{3}$ ?

*Pupil:* 6 is the common denominator.

*Teacher:* Of  $\frac{1}{3}$  and  $\frac{1}{4}$ ?

*Pupil:* 12.

*Teacher:* Of  $\frac{1}{5}$  and  $\frac{1}{7}$ ?

*Pupil:* The common denominator is 35.

*Teacher:* The two denominators belong to different arithmetical series, and the common denominator is the product of the two. The denominators in the examples just given have no common denominator. What is the common denominator of  $\frac{1}{3}$  and  $\frac{1}{7}$ ?

*Pupil:* 7 and 3 have no common factor, so the common denominator of  $\frac{1}{3}$  and  $\frac{1}{7}$  is  $7 \times 3 = 21$ .

*Teacher:* What are the common denominators of these pairs of fractions,

$\frac{1}{4}$  and  $\frac{1}{6}$ ,  $\frac{1}{10}$  and  $\frac{1}{15}$ ,  $\frac{1}{8}$  and  $\frac{1}{20}$ ? These pairs of fractions are related by common factors, because they belong to similar arithmetical series. We find the lowest common denominators in such cases by going up in the arithmetical series of the largest denominator and testing every member of the series to see if the smallest denominator is contained in it. What is the lowest common denominator of  $\frac{1}{8}$  and  $\frac{1}{20}$ ?

*Pupil:* 20 is not divisible by 8. The next number in the arithmetical series is 40. 40 is divisible by 8. Hence, 40 is the least common denominator.

*Teacher:* Summarize what we have learned about finding the least common denominator.

*Pupil:* We find the least common denominator in the arithmetical series of the largest denominator.

HANNOVER. CLASS V a. (THIRD YEAR.) ARITHMETIC. 54 GIRLS

(See lesson in the same class on page 322.)

*Teacher:* When did Henry hold his first banquet in Hannover?

*Pupil:* He held his first banquet here in 1163.

*Teacher:* How long ago is that?

*Pupil:* That was 751 years ago.

*Teacher:* Solve that aloud.

*Pupil:* From 1163 to 1863 was 700 years. From 1863 to 1900 was 37 years and from 1900 to 1914 is 14 years. 37 years and 14 years are 51 years. So all together, 751 years.

*Teacher:* When was Lauenrode built?

*Pupil:* It was built in 1215.

*Teacher:* How long ago was that? Be clever. (The answer came at once.)

*Pupil:* 699 years.

*Teacher:* How did you figure it so quickly?

*Pupil:* There is only 1 year lacking until 1915, or exactly 700 years since 1215.

*Teacher:* When was Lauenrode destroyed?

*Pupil:* It was destroyed in 1371.

*Teacher:* How long did it stand?

*Pupil:* It stood 156 years. From 1215 to 1371 is 156 years. And from 1371 to 1527 is 156 years. Therefore, in all 312 years.

*Teacher:* How long ago was that? I mean when the *Burg* was destroyed.

*Pupil:* It was destroyed 543 years ago. From 1371 to 1914 was 543 years.

years, and from 1871 to 1900 was 29 years, and from 1900 to 1914, 14 years. 29 years and 14 years are 43 years. Therefore, from 1371 to the present time is 543 years.

*Teacher:* When did Hannover become a city?

*Pupil:* Hannover became a city in 1241.

*Teacher:* How long ago was that?

*Pupil:* That was 673 years ago.

*Teacher:* When was the *Marktkirche* built?

*Pupil:* The *Marktkirche* was built in 1250.

*Teacher:* How long ago was the *Marktkirche* built? Solve aloud.

*Pupil:* It was built 664 years ago. From 1250 to 1850 is 600 years, and from 1850 to 1900 is 50 years, and from 1900 to 1914 is 14 years. Fifty (50) years and 14 years are 64 years. Therefore, all together 664 years.

*Teacher:* When was the Nicolai Foundation established?

*Pupil:* The *Nicolai Stift* was established in 1256.

*Teacher:* Calculate how long ago that has been.

*Pupil:* From 1256 to 1856 is 600 years. From 1856 to 1900 is 44 years. From 1900 to 1914 is 14 years. 44 years and 14 years make 58 years. Therefore, together, 658 years.

*Teacher:* What have you noticed recently in the store windows?

*Pupil:* "White Week."

*Pupil:* "10 % rebate."

*Teacher:* What is "White Week"?

*Pupil:* Always about the first of February the merchants sell white goods at a reduction for a few days.

*Teacher:* What is "10 % rebate"?

*Pupil:* That means you can buy 1 mark's worth of goods for 90 pfennigs.

*Teacher:* Rebate means a reduction. What is "inventory sale"? (No answer.) Every year the merchant goes over his wares and takes stock of them and sees what he has. Things that he has not been able to sell readily, he places on sale and this is called an "inventory sale."

*Teacher:* I buy something for 8 M. and receive 10 % rebate. What do I pay? Give just the result.

*Pupil:* 7.20 M.

*Teacher:* I buy for 5 M., 10 % rebate. What do I pay?

*Pupil:* 4.50 M.

*Teacher:* I buy for 12 M., 10 % rebate. What do I pay?

*Pupil:* 10.80.

*Teacher:* Solve that aloud.

*Pupil:* I receive on 1 M., 10 Pf. reduction. On 12 M. I receive 12 times 10 Pf. or 1.20 M. reduction. Therefore, I must pay 12 M. less 1.20 M. or 10.80 M.

*Teacher:* I buy for 6.50 M., 10 % rebate. What must I pay?

*Pupil:* On 1 M. I receive 10 Pf. rebate. On 6 M. 6 times 10 Pf. or 60 Pf. On 50 Pf. I receive 5 Pf. rebate. In all I receive 65 Pf. rebate. Therefore, I must pay 6.50 M. — .65 M. or 5.85 M.

*Teacher:* I buy for 4.50 M., 10 % rebate. What do I pay?

*Pupil:* 4.05 M.

*Teacher:* A whole mark has how many pfennigs?

*Pupil:* A whole mark has 100 Pf.

*Teacher:*  $\frac{1}{4}$  M.?

*Pupil:*  $\frac{1}{4}$  M. has 25 Pf.

*Teacher:*  $\frac{1}{2}$  M.?

*Pupil:*  $\frac{1}{2}$  M. has 50 Pf.

*Teacher:*  $\frac{3}{4}$  M.?

*Pupil:*  $\frac{3}{4}$  M. has 75 Pf.

*Teacher:* How many pfennigs has  $6\frac{1}{4}$  M.?  $\frac{1}{2}$  M.?

*Pupil:* 625 Pf.

*Teacher:* How many pfennigs in  $3\frac{3}{4}$  M.?

*Pupil:*  $3\frac{3}{4}$  M. have 375 Pf.

*Teacher:*  $\frac{1}{5}$  M.?

*Pupil:* 20 Pf.

*Teacher:*  $\frac{1}{3}$  M.

*Pupil:*  $\frac{1}{3}$  M. have 80 Pf.

*Teacher:* 25 Pf. is made up of what fractional parts of a mark?

*Pupil:* 25 Pf. are  $\frac{1}{4}$  M.

*Pupil:* 25 Pf. are  $\frac{1}{5}$  M. +  $\frac{1}{20}$  M.

*Pupil:*  $\frac{5}{20}$  M.

*Pupil:*  $\frac{5}{20}$  M. —  $\frac{1}{20}$  M.

*Teacher:* Of what fractional parts of a mark are 60 Pf. made up?

*Pupil:*  $\frac{1}{2}$  M. +  $\frac{1}{10}$  M.

*Pupil:*  $\frac{3}{5}$  M.

*Pupil:*  $\frac{12}{20}$  M.

*Pupil:*  $\frac{2}{4}$  M. +  $\frac{1}{10}$  M.

*Pupil:*  $\frac{6}{10}$  M.

*Pupil:*  $\frac{5}{10}$  M. +  $\frac{1}{20}$  M.

*Teacher:* Of what fractional parts of a mark are 45 Pf. made up?

*Pupil:*  $\frac{1}{4}$  M. +  $\frac{1}{20}$  M.

*Pupil:*  $\frac{9}{20}$  M.

*Pupil:*  $\frac{2}{3}$  M. +  $\frac{1}{20}$  M.

*Pupil:*  $\frac{1}{2}$  M. -  $\frac{1}{20}$  M.

*Pupil:*  $\frac{1}{4}$  M. +  $\frac{1}{10}$  M. +  $\frac{1}{10}$  M.

*Pupil:*  $\frac{1}{4}$  M. +  $\frac{1}{5}$  M.

ARITHMETIC. CLASS III. (FIFTH YEAR.) STEGLITZ. BERLIN. BOYS

*Teacher:* What is the product of  $1\frac{1}{4} \times 5$ ?

*Pupil:*  $9\frac{3}{4}$ .

*Teacher:* Solve it orally.

*Pupil:*  $5 \times 1$  are 5.  $5 \times \frac{1}{4}$  are  $\frac{5}{4}$  or  $1\frac{1}{4}$ , together,  $9\frac{3}{4}$ .  $\therefore 5 \times 1\frac{1}{4}$  are  $9\frac{3}{4}$ .

*Teacher:* Write this problem on the board:  $12 \times 6\frac{2}{3}$ .

*Pupil:* Solution: (Pupil talking as he solved.)

$$12 \cdot 6\frac{2}{3} = 12 \cdot 6 + \left( 12 \cdot \frac{2}{3} = \frac{\overset{2}{\cancel{12}} \cdot 5}{\cancel{3}} \right) = 10.$$

$$\begin{array}{r} 72 \\ 10 \\ \hline 82 \end{array}$$

$$\therefore 12 \times 6\frac{2}{3} = 82.$$

*Teacher:* How do you multiply fractions?

*Pupil:* The numerator of the fraction is multiplied by the number and divided by its denominator.

*Teacher:* If a cyclist can ride  $3\frac{3}{4}$  kilometers in  $\frac{1}{5}$  of an hour, how far can he ride in  $\frac{5}{8}$  hr.?

*Pupil:* (solving at the board):

$$5 \cdot 3\frac{3}{4} \text{ km.} = 5 \cdot 3 \text{ km.} + \left( 5 \cdot 3\frac{3}{4} \text{ km.} = \frac{5 \cdot 3}{4} = \frac{15}{4} \text{ km.} = 3\frac{3}{4} \text{ km.} \right)$$

$$\begin{array}{r} 15 \text{ km.} \\ 3\frac{3}{4} \text{ km.} \\ \hline 18\frac{3}{4} \text{ km.} \end{array}$$

$\therefore$  He rode  $18\frac{3}{4}$  km. in  $\frac{5}{8}$  of an hour.

*Teacher:* How much time had he used?

*Pupil:*  $\frac{5}{8}$  of a minute.

*Pupil:* He had used fifty (50) minutes.

*Teacher:* What is  $\frac{1}{8}$  multiplied by  $\frac{1}{4}$ ? (No answers were correct.) Well then, if I divide a whole in 8 parts, how many eighths do I get?

*Pupil:* We get ( $\frac{8}{8}$ ) eight eighths.

*Teacher:* Well, if I divide each one of these eighth parts into four parts, how many parts shall I have?

*Pupil:* There will be 32 parts.

*Teacher:* Very well, then, what is  $\frac{1}{8}$  multiplied by  $\frac{1}{4}$ ?

*Pupil:*  $\frac{1}{8}$  multiplied by  $\frac{1}{4}$  is  $\frac{1}{32}$ . . . .

*Teacher:* In division we can only divide units of one denomination by units of like denomination. We cannot divide apples by plums. And so it is in fractions. I cannot divide the area of the playground by meters. By what can I divide the area of the playground?

*Pupil:* We can divide it by square meters.

*Teacher:* How often is one meter contained in the length of this room?

*Pupil:* A meter is contained nine times in the length of the room.

*Teacher:* How often are 6 pears contained in 90 plums?

*Pupil:* 15 times.

*Pupil:* They are not contained at all. It cannot be done.

*Teacher:* To how many boys can I give 6 pears each, if I have ninety (90) pears?

*Pupil:* To fifteen boys.

*Teacher:* How often is  $\frac{2}{3}$  contained in  $\frac{4}{3}$ ?

*Pupil:*  $\frac{2}{3}$  is contained in  $\frac{4}{3}$  two (2) times.

*Teacher:* Divide  $3\frac{3}{4}$  by  $\frac{3}{4}$ . What must we do with the mixed number?

*Pupil:* The mixed number must be changed to an improper fraction.  $3\frac{3}{4}$  are equal to  $1\frac{3}{4}$ .  $1\frac{3}{4}$  divided by  $\frac{3}{4} = 5$ .

*Teacher:* Divide  $5\frac{1}{3}$  by  $\frac{2}{3}$ .

*Pupil:*  $5\frac{1}{3} \div \frac{2}{3}$ :  $5\frac{1}{3}$  are equal to  $1\frac{2}{3}$ :  $1\frac{2}{3}$  divided by  $\frac{2}{3} = 8$ .

*Teacher:*  $9\frac{1}{3} \div 3\frac{1}{3}$ . Now use your eyes as well as your minds.

*Pupil:* Three.

(The period was interrupted and finally cut short by some secretarial work which the teacher had to attend to.)

#### ARITHMETIC. SIXTH YEAR. BOYS. STEGLITZ

*Teacher:* There were four persons in business together. A had invested 30,000 M., B 10,000 M., C 7,000 M., and D 1,000 M. The earnings for the year were 10,701.20 M. D received 2% of the earnings for managing the business. What did each one receive after D had been paid?

*Pupil:* The first thing I do is to find 2% of 10,701.2 M.

*Teacher:* What is 2% of 10,701.20 M.?

*Pupil:* 2% of 10,701.20 M. is 214.02 M.

*Teacher:* How do you get that? Write the amount on the board.

*Pupil:* (Writes 10,701.20 M. on the board.)

*Teacher:* What do you need to do now to find 2% of the amount?

*Pupil:* 1% of 10,701.20 M. is 107.01 M.

2% of 10,701.20 is 214.02 M.

Then I subtract 214.02 M. from 10,701.20 M. in order to find the amount which is divided among A, B, C, and D. In all there are 48 parts;

A receives  $\frac{3}{8}$ , B receives  $\frac{1}{8}$ , C receives  $\frac{7}{8}$ , and D receives  $\frac{1}{8}$ .

10,701.20 M. less 214.02 M. is 10,487.18 M., which is the profit less the 2% paid to D for his work. (Up to this point the solution was oral.)

$\frac{1}{48}$  of 10,487.18 M. =  $10,487.18 \text{ M.} \div 48 = 218.44$ .

A receives  $30 \times 218.44 \text{ M.} = 6553.20 \text{ M.}$

B receives  $10 \times 218.44 = 2184.40 \text{ M.}$

C receives  $7 \times 218.44 = 1529.08 \text{ M.}$

D receives  $1 \times 218.44 = 218.44 \text{ M.}$

*Teacher:* A and B subscribe for a newspaper together, paying 1.80 M. quarterly. A pays 20 Pf. more than B. What does each pay?

*Pupil:* 1.80 M. less .20 M. = 1.60 M., which is the amount that is equally divided between A and B.

1.60 M.  $\div 2 = .80 \text{ M.}$  But since A pays 20 Pf. more than B, he pays 1.00 M. and B pays .80 M.

*Teacher:* The principle is to subtract the amount which one pays more than the other, then the remainder is divided equally between them. Solve the problem again.

*Pupil:* 1.80 M. - .20 M. = 1.60 M.

1.60 M.  $\div 2 = .80 \text{ M.}$

.80 M. + .20 M. = 1.00 M., what A pays.

.80 M. = what B pays.

*Teacher:* Read the amounts paid by each as *parts*.

*Pupil:* 1 part + 1 part + .20 M. = 1.80 M.

2 parts + .20 M. = 1.80 M.

2 parts = 1.60 M.

1 part = .80 M.

B pays 1 part = .80 M.

A pays 1 part + 20 M. = 1.00 M.

*Teacher:* A and B divide 60 M., A receiving 10 M. more than B. What does each receive?

*Pupils:* 1 part + 10 M. + 1 part = 60 M.

2 parts + 10 M. = 60 M.

2 parts = 50 M.

1 part = 25 M.

1 part + 10 M. = 35 M., what A receives.

1 part = 25 M., what B receives.

#### ARITHMETIC. SIXTH YEAR. BOYS. STEGLITZ. BERLIN

(The following is a short exercise given in about ten minutes on registration day when classes were not completely organized.)

*Teacher:* What is a fraction?

*Pupil:* A fraction is a part of a whole.

*Teacher:* That is not exactly right.

*Pupil:* A fraction is one or more parts of a whole.

*Teacher:* How many parts are there in a fraction?

*Pupil:* There are three parts.

*Teacher:* What are they?

*Pupil:* They are the numerator, the line, and the denominator.

*Teacher:* What is the function of the numerator?

*Pupil:* The numerator (*Zähler*) is above the line and tells the number of parts taken to make the fraction.

*Teacher:* What does the denominator do?

*Pupil:* The denominator tells the size of the parts into which the whole is divided.

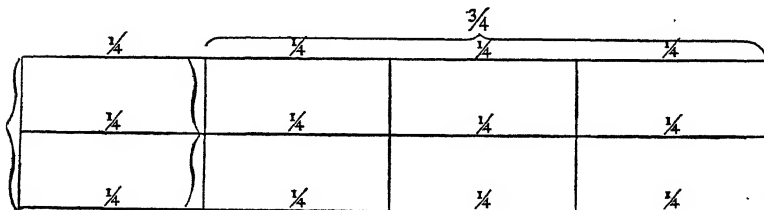
*Teacher:* What is  $\frac{3}{4}$ ? What does that mean?

*Pupil:* It means that a whole is divided into four (4) parts, and that three are taken to make up the fraction  $\frac{3}{4}$ .

*Teacher:* Three fourths ( $\frac{3}{4}$ ) can come from more than one unit or whole. How?

*Pupil:*  $\frac{3}{4}$  is  $3 \times \frac{1}{4}$  of a whole.

*Teacher:* One can get the fraction  $\frac{3}{4}$  in another way.





*Teacher:* One can take three one fourth parts of one whole, but there is another way. One can take three wholes and take the fourth part of each and thus have three fourths ( $\frac{3}{4}$ ), as the diagram shows. What does  $\frac{3}{4}$  mean, when one takes the fourth part of each of three wholes or units?

*Pupil:* Three fourths would mean 3 divided by 4, or  $\frac{3}{4}$ .

*Teacher:* That is all for this morning. What is your next class?

## GEOMETRY. SEVENTH YEAR. GIRLS

*Teacher:* What kinds of lines are there?

*Pupil:* There are straight lines and crooked lines.

*Teacher:* What kinds of straight lines are there?

*Pupil:* There are perpendicular, horizontal, and oblique lines.

*Teacher:* What kinds of crooked lines are there?

*Pupil:* There are spiral lines, snake-shaped lines, and broken lines, and also curved and mixed lines.

*Teacher:* Very well, draw those on the board for me. How do we measure a line?

*Pupil:* We measure a line by a unit of linear measure, for example, the centimeter or kilometer.

*Teacher:* Show me a unit of linear measure.

*Pupil:* That is one (pointing at the *meter*, which is marked off on the walls of German schoolrooms).

*Teacher:* Yes, how long is that line (on the board) in all?

*Pupil:* It is two meters long.

*Teacher:* How many meters in a kilometer?

*Pupil:* There are one thousand meters in a kilometer.

*Teacher:* How far would that be from here?

*Pupil:* That would be about to *Ringstrasse* or the railway station.

*Teacher:* What is that (drawing a circle on the board)?

*Pupil:* That is a circle.

*Teacher:* What are these (pointing at the arms of the compass)?

*Pupil:* They are the arms of the compass.

*Teacher:* What do we call lines which are equally distant from each other at all points?

*Pupil:* We call such lines parallel lines.

*Teacher:* And lines which are not equally distant from each other?

*Pupil:* We call them non-parallel lines.

*Teacher:* What happens when two non-parallel lines are projected?

*Pupil:* They meet or cut each other.

*Teacher:* What is formed by their intersections?

*Pupil:* Angles are formed when two lines intersect.

*Teacher:* If I place the arms of the compass perpendicular to each other, what kind of an angle do I get?

*Pupil:* That is a right angle.

*Teacher:* If I spread the arms of the compass a little farther apart, what kind of an angle is that?

*Pupil:* That is an obtuse angle.

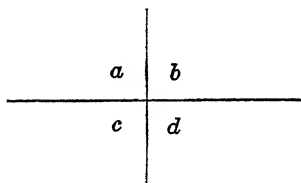
*Teacher:* If I put the arms of the compass so that they form a straight line, what kind of an angle is that?

*Pupil:* That is a straight line or an angle of  $180^\circ$ .

*Teacher:* Yes, or straight angle. If I make the angle still larger than  $180^\circ$ , what do we call it?

*Pupil:* We call that a reflex angle.

*Teacher:* Draw all these kinds of angles on the board. Where have we a right angle in the room?



*Pupil:* Over there in the corner (shows the angle). (The teacher then has the girls find the different types of angles in various places in the room.)

*Teacher:* How do these lines stand with reference to each other?

*Pupil:* They are perpendicular to each other.

*Teacher:* What kinds of angles are *a*, *b*, *c*, and *d*?

*Pupil:* They are all right angles.

*Teacher:* Show me such angles in the room.

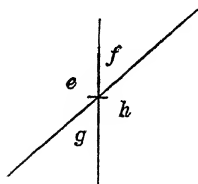


FIG. a.

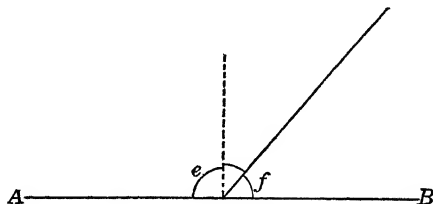


FIG. b.

*Teacher:* The angles *e* and *f*, and *g* and *h*, are complementary angles. They have one side in common and the other sides form a straight line. What are the angles *e* and *f* equal to?

*Pupil:* The angles  $e$  and  $f$  are equal to 2 right angles.

*Teacher:* How do you know that?

*Pupil:* The angles formed by a straight line and a perpendicular upon it are equal to two right angles.

*Teacher:* The angles  $e$  and  $f$  (Fig.  $a$ ) are called adjacent angles and adjacent angles are equal to two right angles. What kind of angles are  $e$  and  $f$ ?

*Pupil:* The angles  $e$  and  $f$  are adjacent angles and are equal to 2 right angles.

*Teacher:* What kind of angles are  $a$  and  $d$  (Fig.  $c$ )?

*Pupil:* They are vertical angles.

*Teacher:* Vertical angles are equal.

The angle  $e$  (Fig.  $a$ ) + the angle  $f$  = 2 right angles.

The angle  $h$  (Fig.  $a$ ) + the angle  $f$  = 2 right angles.

Then  $\angle e + \angle f = \angle h + \angle f$ , because things equal to the same thing are equal to each other. Then I subtract the angle  $f$  from both quantities and I have

$$\angle e = \angle h.$$

How can that be true?

*Pupil:* Equals taken from equals leave equals.

*Teacher:* That is good. I see you have given attention.

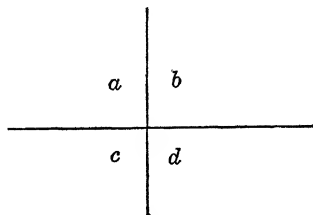
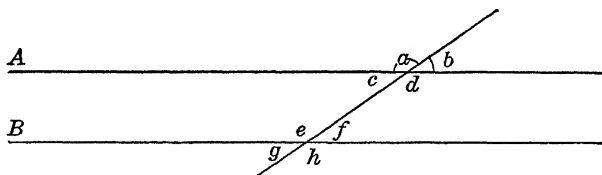


FIG.  $c$ .



*Teacher:* What kind of lines are  $A$  and  $B$ ?

*Pupil:* They are parallel lines.

*Teacher:* I shall name one of a pair of adjacent angles and you name the other. The angle  $a$ .

*Pupil:* The angle  $c$ .

*Pupil:* Or the angle  $b$ .

*Teacher:* The angle  $e$ .

*Pupil:* The angle  $f$  or  $g$ . (This was continued for some minutes.)

*Teacher:* What is the sum of such adjacent angles?

*Pupil:*  $180^{\circ}$ .

*Teacher:* Now let us see the vertical angles. What is the relation of vertical angles?

*Pupil:* Vertical angles are equal.

*Teacher:* What is the angle corresponding to the angle  $a$ ?

*Pupil:* The angle  $d$ .

*Teacher:* Pick out other pairs of vertical angles.

*Pupil:* The angles  $b$  and  $c$ ,  $e$  and  $h$ ,  $g$  and  $f$ .

*Teacher:* Look at the angles  $a$  and  $e$ . We have a new name for them. They are corresponding angles. What kind of angles are they?

*Pupil:* They are corresponding angles.

*Teacher:* Pick out some other corresponding angles.

*Pupil:* The angles  $b$  and  $f$ ,  $d$  and  $h$ , and  $g$  and  $c$ .

*Teacher:* Why are such angles equal? (No answer.) If we were to place the angle  $e$  upon the angle  $a$ , by just shoving the lower part of the figure up, the angles would coincide. We have another kind of an angle, like those we have here in angle  $a$  and angle  $g$ . We call them supplementary angles. What do we call them?

*Pupil:* We call them supplementary angles.

*Teacher:* There is another kind of angle. Notice the angles  $a$  and  $h$ . They are called alternate exterior angles (*Wechselwinkel*). What are they called?

*Pupil:* They are called alternate exterior angles.

*Teacher:* They are always equal. Why? (No answer.) What is the relation of the angle  $a$  and the angle  $d$ ?

*Pupil:* They are equal.

*Teacher:* What do we know of the angle  $d$  and the angle  $h$ ?

*Pupil:* They are equal.

*Teacher:* What is the conclusion about angle  $a$  and angle  $h$ ?

*Pupil:* They must be equal too, because things equal to the same thing are equal to each other.

*Teacher:* Yes. What kind of angles have we learned about to-day?

*Pupil:* We have learned about alternate exterior angles.

(The bell rang at this point. The teacher said that geometry was of little benefit to the girls and that he never insisted on a strict proof. The discipline was very poor.)

## ARITHMETIC. SEVENTH YEAR. BOYS

*Teacher:* Write on the board 4 meters as kilometers.

*Pupil:* 0,004 km. (writing). Naught, comma, naught, naught, four kilometers.

*Teacher:* How else can that be read?

*Pupil:* Four-thousandth of a kilometer, or four meters.

*Teacher:* Write 40 meters as kilometers.

*Pupil:* 0,040 km.

*Teacher:* Write 400 meters as kilometers.

*Pupil:* 0,400 km.

*Teacher:* Write thirty-four and thirty-six thousandths kilometers.

*Pupil:* (Writes) 34,036 km.

*Teacher:* Read that in all possible ways.

*Pupil:* Thirty-four, comma, naught, three, six kilometers. Thirty-four . . .

*Pupil:* Thirty-four, and thirty-six thousandths kilometers.

Thirty-four kilometers, thirty-six meters.

Thirty-four thousand, thirty-six meters.

*Teacher:* Repeat that all together.

*Pupils:* Thirty-four, comma, naught, three, six kilometers.

Thirty-four, and thirty-six thousandths kilometers.

Thirty-four kilometers, thirty-six meters.

Thirty-four thousand, thirty-six kilometers.

*Teacher:* Karl, repeat that once more.

*Pupil:* Thirty-four, comma, naught, three, six kilometers.

Thirty-four, and thirty-six thousandths kilometers.

Thirty-four kilometers, thirty-six meters.

Thirty-four thousand, thirty-six kilometers.

*Teacher:* Read that all together (writing 135,05 m. on the board).

*Pupils:* One hundred thirty-five, comma, naught, five meters.

One hundred thirty-five, and five hundredths meters.

One hundred thirty-five meters, five centimeters.

Thirteen thousand five hundred five centimeters.

*Teacher:* Repeat this together : 417,30 Hektoliter (hl.).

*Pupils:* Four hundred seventeen, comma, thirty hektoliters.

Four hundred seventeen, and thirty hundredths hektoliters.

Four hundred seventeen hektoliters, thirty liters.

Forty-one thousand, seven hundred thirty liters.

*Teacher:* Repeat this together : 300,01 Marks.

*Pupil:* Three hundred, comma, naught, one marks.

Three hundred, and one hundredth marks.

Three hundred marks, one pfennig.

Thirty thousand, one pfennigs.

*Teacher:* How do you write 1 Pf. as a decimal?

*Pupil:* 0,01 M., naught, comma, naught, one mark.

*Teacher:* How do you write 10 Pf.?

*Pupil:* 0,10 M., naught, comma, ten mark.

*Teacher:* What is a fraction?

*Pupil:* A fraction is the simple or compound part of a whole.

*Teacher:* What is the numerator?

*Pupil:* The numerator is the number which tells the parts which I have taken of the whole. It is above the line.

*Teacher:* What is the denominator?

*Pupil:* The denominator tells into how many parts the whole has been divided. It is below the line.

*Teacher:* Out of how many wholes can a fraction come?

*Pupil:* A fraction can be made up from one whole or several wholes.

*Teacher:* What is  $\frac{2}{3}$  when derived from two wholes?

*Pupil:*  $\frac{2}{3}$  is  $\frac{1}{3}$  of 2, or  $\frac{2}{3}$  means 2 divided by 3.

*Teacher:* Again.

*Pupil:*  $\frac{2}{3}$  is  $\frac{1}{3}$  of 2, or  $\frac{2}{3}$  means 2 divided by 3.

*Teacher:* Again.

*Pupil:*  $\frac{2}{3}$  is  $\frac{1}{3}$  of 2, or  $\frac{2}{3}$  means 2 divided by 3.

*Teacher:* What is  $\frac{4}{5}$ ?

*Pupil:*  $\frac{4}{5}$  is  $\frac{1}{5}$  of 4, or 4 divided by 5.

*Teacher:* What is  $\frac{5}{6}$ ?

*Pupil:*  $\frac{5}{6}$  is  $\frac{1}{6}$  of —.

*Teacher:* That is wrong.

*Pupil:*  $\frac{5}{6}$  is  $\frac{1}{6}$  of 5, or 5 divided by 6.

*Teacher:* What is  $\frac{7}{8}$ ?

*Pupil:*  $\frac{7}{8}$  is  $\frac{1}{8}$  of 7, or 7 divided by 8.

*Teacher:*  $\frac{11}{11}$ ?

*Pupil:*  $\frac{11}{11}$  is  $\frac{1}{11}$  of 4, or 4 divided by 11.

*Teacher:* What is  $\frac{9}{13}$ ?

*Pupil:*  $\frac{9}{13}$  is  $\frac{1}{13}$  of 9, or 9 divided by 13.

*Teacher:* What is  $\frac{8}{15}$ ?

*Pupil:*  $\frac{8}{15}$  is  $\frac{1}{15}$  of 8, or 8 divided by 15.

*Teacher:* I let a pitcher fall and it breaks into twelve equal pieces. I put them together. What have I?

*Pupil:* You would have a whole pitcher.

*Teacher:* If I added two equal parts more?

*Pupil:* Then you would have more than a whole pitcher.

*Teacher:* Name a proper fraction.

*Pupil:*  $\frac{3}{5}$ .

*Teacher:* Name improper fractions.

*Pupil:*  $1\frac{9}{8}$  and  $1\frac{1}{10}$ .

*Pupil:*  $1\frac{2}{3}$  and  $\frac{4}{3}$ .

*Pupil:*  $\frac{5}{2}$ .

*Teacher:* Take a proper fraction and compare the numerator and the denominator.

*Pupil:* The numerator is less than the denominator.

*Teacher:* Take an improper fraction and compare the numerator and the denominator.

*Pupil:* The numerator is larger than the denominator.

*Teacher:* Summarize that.

*Pupil:* In an improper fraction, the numerator is greater than the denominator; and in a proper fraction, the numerator is less than the denominator.

*Teacher:* Repeat that again.

*Pupil:* In an improper fraction, the numerator is greater than the denominator; and in a proper fraction the numerator is less than the denominator.

*Teacher:* Repeat that again.

*Pupil:* In an improper fraction the numerator is less than the denom —

*Teacher:* That is wrong.

*Pupil:* In an improper fraction the numerator is greater than the denominator, and in a proper fraction the numerator is less than the denominator.

*Teacher:* Compare the two kinds of fractions with a whole.

*Pupil:* An improper fraction is greater than a whole, while a proper fraction is less than a whole.

*Teacher:* Take  $1\frac{1}{10}$ , what can we do with it? We can change it to a mixed number. What?

*Pupil:*  $1\frac{1}{10}$  equals  $1\frac{1}{10}$ .

*Teacher:*  $\frac{3}{8}$ ?

*Pupil:*  $\frac{3}{8}$  equals  $1\frac{3}{8}$ .

*Teacher:*  $\frac{9}{8}$ ?

*Pupil:*  $\frac{9}{8}$  equal  $1\frac{1}{8}$ .

*Teacher:* What does  $\frac{9}{8}$  mean?

*Pupil:*  $\frac{9}{8}$  means 9 divided by 8.

*Teacher:* How do we change an improper fraction to a mixed number?

*Pupil:* We divide the numerator by the denominator.

*Teacher:* Change  $4\frac{35}{12}$  to a mixed number.

*Pupil:*  $4\frac{35}{12} = 435 \div 12 = 36$  and 3 remainder  $= 36\frac{3}{4}$  or  $36\frac{1}{2}$ .

### GEOMETRY. EIGHTH YEAR. GIRLS

*Teacher:* Draw a circle.

*Pupil:* (Pupil draws a circle on the board.)

*Teacher:* We always put the letter C at the center of a circle.

*Teacher:* What is a circle?

*Pupil:* A circle is a plane bounded by a curved line all points of which are equidistant from a point within called the center.

*Teacher:* What are the parts of a circle?

*Pupil:* The parts of the circle are the circumference and the area.

*Teacher:* What is the radius?

*Pupil:* The radius is a line drawn from the center to the circumference.

*Teacher:* What is the diameter?

*Pupil:* The diameter of a circle is a straight line which passes through the center and intersects the circumference at two points.

*Teacher:* Compare the diameter and the radius.

*Pupil:* The diameter is twice the length of the radius.

*Teacher:* How often is the diameter contained in the circumference?

*Pupil:* The diameter of a circle is contained  $3\frac{1}{2}$  times in the circumference of that circle.

*Teacher:* When we know the circumference of the circle, how do we find the diameter?

*Pupil:* We divide the circumference of a circle by  $3\frac{1}{2}$  to find its diameter.

*Teacher:* Read  $3\frac{1}{2}$  as a decimal.

*Pupil:* 3.1416.

*Teacher:* Draw a tangent to that circle.

*Teacher:* Draw a chord. Can you show me a segment? Can you show me a sector? (Directions were carried out.)

*Teacher:* The diameter of a table was two (2) meters. Each guest was allowed 60 cm. How many guests?

*Pupil:*  $10\frac{1}{2}$  guests.



*Teacher:* How did you get that?

*Pupil:*  $3\frac{1}{2} \times 2$  meters =  $6\frac{1}{2}$  m. = 628 cm. Each guest was given 60 cm., therefore, there were places for about  $10\frac{1}{2}$  guests.

*Teacher:* We have taxicabs. What regulates price?

*Pupil:* The price depends upon the distance traveled.

*Teacher:* How does one determine the distance traveled?

*Pupil:* The distance is determined by the number of revolutions made by the wheel, which are registered by a feather attached to the axle.

*Teacher:* A wheel is 1 m. in diameter. How far will the wagon travel when the wheel turns once?

*Pupil:*  $3\frac{1}{2}$  meters.

*Teacher:* How far in 100 revolutions?

*Pupil:* It will travel 314.16 meters.

*Teacher:* In 200 revolutions?

*Pupil:* It will travel 628.32 meters.

*Teacher:* Who fixes the price for taxicabs?

*Pupil:* The police.

*Teacher:* One must have a permit in order to be allowed to operate a public cab. Every one may not do so. Before one is allowed to do so, one must give evidence of his ability to drive and show a certain knowledge of traffic rules and be thoroughly acquainted with the city. In case it is an auto taxicab, the chauffeur must pass an examination to demonstrate that he understands the machine and its operation. Only a fixed number of cabs are allowed to solicit fares at any one cab stand, and all such cabs must be registered with the police. The price of fare is fixed for definite distance. The meter registers for one, two, or three persons. The minimum fare is 70 Pf. for the first 500 m. How far is that?

*Pupil:* That is about as far as from *Schulzenstrasse* to *Ringstrasse*.

*Teacher:* Then a charge of 10 Pf. is made for every additional 200 m.

Who decides the price?

*Pupil:* The police fix the price.

*Teacher:* What registers the price?

*Pupil:* The meter registers the price and the distance.

*Teacher:* What determines the amount of the fare?

*Pupil:* The distance traveled determines the fare.

*Teacher:* The circumference of a taxicab wheel is 0.80 m.

The first 500 m. costs 70 Pf.

Each additional 300 m. costs 10 Pf.

The total fare was 2.80 M. How far did I travel?

How many revolutions did the wheel make?

*Pupil:* The wheel was in circumference  $3\frac{1}{2} \times 0.80 \text{ m.} = 2.51 \text{ m.}$  or 2.5 m.

Therefore, the wheel covered 2.5 m. in every revolution.

*Teacher:* Does that help you find how far you went?

*Pupil:* No. For .70 M., 500 m. were covered. That leaves 2.80 M. - 0.70 M. = 2.10 M. Each 0.10 M. pays for an additional 300 m.  $2.10 \text{ M.} \div 0.10 = 21$ . Hence, for 2.10 M. one travels  $21 \times 300 \text{ m.} = 6300 \text{ m.}$

$$6300 \text{ m.} + 500 \text{ m.} = 6800 \text{ m.} = 6.8 \text{ km.}$$

Whence we find that one rides 6.8 km. for 2.80 M.

*Teacher:* Put that on the board. On a chausée one would travel from the 0.0 kilometer stone to the one marked 6.8 km. How many revolutions did the wheel make?

*Pupil:* The wheel would make as many revolutions as 2.5 m. is contained in 6.8 km.  $2.5 \text{ m.} = .0025 \text{ km.}$

*Teacher:* No, there is an easier way.

*Pupil:* We change 6.8 km. to meters.  $6.8 \text{ km.} = 6800 \text{ m.}$   $6800 \div 2.5 = 68000 \text{ m.} \div 25 \text{ m.} = 2720$ . Therefore, the wheel revolved 2720 times.

*Teacher:* Why did you change 2.5 m. to 25 m.?

*Pupil:* When I divide by a decimal, I always make the divisor a whole number.

*Teacher:* Next we shall see how we reckon the area of a circle. The circumference is really a straight line. The circumference is an infinite number of straight lines, each of which forms the base of a triangle, the apex of which is the center of the circle. (Exhibited a wooden circle broken into triangles.)

Into what can we break up a circle?

*Pupil:* We can break up a circle into triangles.

*Teacher:* This fact is of importance for the calculation of the area of a circle.

How do we find the area of a triangle?

*Pupil:* The area of a triangle equals  $\frac{\text{base} \times \text{altitude}}{2} = \frac{b \times h}{2}$ .

*Teacher:* The area of a triangle equals  $\frac{1}{2}$  of a parallelogram with the same base and altitude. If I wish to find the area of a circle, what is the height of the triangles which make up the circle?

*Pupil:* The radius would represent the height.

*Teacher:* What would represent the base of the triangles?

*Pupil:* The circumference of the circle represents the base of all the triangles.

*Teacher:* How then do I get the area of a circle?

*Pupil:* One could find the area of a circle by finding the area of all the triangles which make up a circle.

*Teacher:* What becomes the base of all the triangles?

*Pupil:* The circumference is the base.

*Teacher:* What is the altitude?

*Pupil:* The radius.

*Teacher:* Let's write that as a formula.

*Pupil:*  $\frac{r \times c}{2} = \text{area of a circle.}$

*Teacher:* How do I find the area of a circle?

*Pupil:* Multiply the radius by the circumference and divide the product by two.

*Teacher:* How do I find the area of a circle?

*Pupil:* I don't know.

*Teacher:* We multiply the radius by the diameter and then by 3.1416, and that is divided by two. Repeat that.

*Pupil:* Area of circle =  $\frac{r \cdot d \cdot 3.1416}{2}$ .

*Teacher:* Again.

*Pupil:* The area of a circle is equal to  $\frac{r \cdot d \cdot 3.1416}{2}$ .

*Teacher:* Write that in your notebooks.

## CHAPTER XVII

### THE *REAL* SUBJECTS

THERE is a group of subjects in the curriculum of the Prussian *Volksschule* known by the general term *Realien*, real subjects. In this group we find history, geography, botany, zoölogy, physiology, chemistry, and physics. We shall take up each of these subjects separately and discuss the methods employed in their teaching. We shall try to base our remarks as nearly as possible upon the observational studies which we have made in elementary schools in various sections of the kingdom.

### HISTORY

In neither the higher nor lower schools was there any historical instruction during the sixteenth century. The study of history, according to educators of that time, belonged in the university. Comenius, in the seventeenth century, asked that history be taught in the vernacular schools, but his request had no effect on the actual introduction of the subject into the elementary curriculum. The Pietists were the first teachers to put history together with the other *Realien* in the *Volksschule*. These studies were designated as the "study of natural and other useful things." The *General-Land-Schul-Reglement* in 1763 made the *Realien* a part of the elementary course, but in spite of this fact there were no special periods set aside for work in history and the instruction consisted more or less in committing to memory dates and names, a practice

**Historical  
Develop-  
ment**

which has persisted down to the present time, though one finds very few teachers who consciously follow this method. Generally there was no regular history text-book.

The Philanthropists contributed considerably to an improvement in the method in history. Previously history had been little more than learning names and dates, but the Philanthropists emphasized the influence of history upon the formation of character, and necessarily demanded a method which would correspond to the aim which they had set. They required that the teacher tell the history to the children in a spontaneous and animated manner, and also that the work be made as objective and concrete as possible. Basedow (1723-1790) recommended the use of the maps and pictures. His *Elementarwerk* was used for this latter purpose because it contained a number of historical illustrations. Salzmann made a still greater advance, in that he connected the history of the community in which he lived with the other work. He also employed direct observation to enrich the character of his instruction, for example, visiting monuments, battlefields, and ruins. Still another step in advance by the Philanthropists was the new practice of having the children repeat in class the history material which the teacher had told them. This method is still followed, although not with the best results.

At the end of the eighteenth century there appeared quite a number of histories for children. By the aid of these books and the pulsing national feeling aroused by the War of Liberation, the interest for history was greatly strengthened. Up to this time the history of culture had found a very little place in the curriculum. The main topics were kings, conquests, and battles. And a very large part of the elementary school history in Germany to-day is concerned with the same subjects. The struggles at the beginning of the nineteenth century emphasized the warlike character of the history instruction in the schools, and there

have been wars frequently enough in Germany to keep alive this spirit until the present time.

Harnisch (1784-1864) was the creator of the subject known as *Weltkunde*, translated best as study or knowledge of the world.

*Weltkunde* on which Harnisch published a book in 1817, included the study of "animals, plants, mankind, history, minerals, peoples, and states." Under *Weltkunde* he made three divisions: study of the home, the nation, and the earth. The work in history was divided accordingly into the study of the home, the fatherland, and the world. The instruction was arranged in concentric circles, beginning with that which was near and going to that which was far away, going from the known to the unknown. During the third and fourth decades there appeared several books on the method of teaching history and on the arrangement and choice of subject matter.

By the *General Regulations* of 1872 separate recitation periods were assigned to the various *real* subjects (history, geography, and science), which fact, indeed, marked a decided advance in the teaching of each of the subjects. Before this time the *Realien* had been treated as a unit, so to speak, but from the date of the new regulations, each of the subjects was treated in a more isolated and independent fashion. Instead of the reading book being used as a text for the *Realien*, a new sort of text-book came into existence, which contained a section for history, one for geography, and other sections for each of the scientific subjects. This type of text-book has evidently proved itself to be of worth, for such texts are used in all German elementary schools to-day, though they are employed more for reference work than for class work.

Since the federation of the German states in 1871, the chief task of history instruction in the elementary school has been the development of patriotism and a strong national feeling.

It seems that the work in history accomplishes three things. It plants in the minds of the children the sense of German citizenship, love of country, and allegiance to and admiration of the ruling house. One's impression after visiting forty or fifty classes in history would be that the purpose of this subject was the glorification of the ruling house. One would think that the course was organized around Charles the Great, the Great Elector, Frederick the Great, Frederick Wilhelm III, William the Great, and the present emperor. And, in fact, one would not be far wrong in drawing this conclusion, for the subject matter of the history course is largely the lives and deeds of these men. One hears not only of the wars and military achievements of these national heroes, but also of their works of peace. Just as in America, the history work is too much about battles, marches, and campaigns, but in a much greater degree than with us. It is very important for the German national policy that the children of the elementary school be enthusiastic for things military, because it is the boys of this school who become the soldiers in the ranks, and it is the girls of the *Volksschule* who become the mothers of German battalions. The teachers do their work well. The history period is the liveliest of the day. The teacher himself is burning with excitement and very often, as he relates to the children the story of Leipzig or Sedan, his voice becomes loud and his manner is more like that of a Fourth of July orator than that of a calm, quiet teacher. The children, however, are military and war-loving in spirit, and the girls are even more enthusiastic than the boys. It may have been only chance, but of all the sixty-four recitations which we have heard in history, forty-eight of them dealt with rulers and their deeds as warriors, or with their campaigns. To any one who understands the national policy of the German empire, it is very clear why this military, patriotic spirit *must* be fostered. The reader

Newer  
Movements  
in History  
Instruction

must not think, however, that the battles and campaigns of the rulers are the only topics of discussion. Love for *Kaiser* and Fatherland is also engendered by a study of the reforms and movements undertaken by the ruling house for the benefit of the lower classes. The teachers emphasize these reforms to show the children how much their ruler loves them, to which the conclusion is that they should love and cherish their monarch in return, which no doubt they do. This nationalistic movement in history directs itself not only toward the ruler, but toward the Fatherland and all things German. Outside of, but still connected with love of ruler, there is inculcated in the heart of the German school child a German attitude of mind, that is, a love of all things German, a love of German customs and traditions. He is not directly taught to hate the French or the English, but in discussing the frontiers which are open to attack, the teacher makes it very clear that Germany must not leave its western boundary unguarded. There is not an overstatement of fact or misrepresentation on the part of the teacher in order to establish the German point of view or to convince the children of German superiority. The German point of view and feeling of superiority is established simply by ignoring the point of view of the French or English. It is very difficult to convey to an American who has not lived among Germans an idea of the intensity of the feeling for German customs, literature, history, power, country, and ruler. It is cultivated not only in history, but also in geography, literature, and song.

But the reader must not think that this feeling of nationalism is the only one which is sought by the teachers of history. We should like to mention as next in prominence, the consideration given to the cultural development of the human race, chiefly, of course, among the Germans. Biedermann in the introduction to his "*Deutsche Volks- und Kulturgeschichte*" writes: "Besides the stories of battles, wars, and treaties of peace, there should



also be treated the most important facts concerning the history of the old German empire, the history of German cities, the growth of civil power, the development of German agriculture, trade, and industry, German inventions, German family life, and German art and science." This point of view has come to be accepted everywhere throughout Germany, so that now a great deal of time is devoted to giving the children a definite idea of the cultural development of their own country and also as far as possible of other countries in so far as they touch German life. This movement in history for the *Volksschule* has been represented by Albert Richter, Geistbeck, Krieger, and Kettel.

There is still another tendency prominent in some of the schools which we have visited and that is to offer a kind of civil government (*Bürgerkunde*) in connection with the history. *Bürgerkunde* has in some schools become an independent subject, but this is not yet the general practice. It is likely to be a new subject some day, but new subjects do not find easy admittance into the German curriculum. The children are taught the constitution of the state, and their duties and rights as citizens; more of duties, however, than of rights. The most important social and industrial laws are studied and the general conditions of social and industrial life are discussed. In schools where a part of the history period is not given to the treatment of these subjects, such subjects are brought up at opportune times in the study of geography, history, science, and arithmetic.

The Social-Democratic party is numerically the strongest in Germany and it forms the chief opposition to the government. It would not be an exaggeration to say that much of the excellent social legislation, as well as industrial legislation, of the last forty years, though coming apparently from the benevolent and fatherly hands of the Hohenzollerns, has been forced through by the socialists.

Anti-Social-  
istic Tend-  
ency of  
History In-  
struction

These measures have frequently been allowed to pass merely to satisfy the lower classes, and not because the rulers were especially beneficent. The emperor has been clever enough to see that to refuse certain measures would only endanger his own position by increasing the number of socialists and the sum total of discontent among the masses. In order to stem the tide of socialism which had been sweeping over the empire, and which, in spite of all efforts to combat it, is becoming stronger, the emperor issued an order in 1889 which instructed the schools to help in putting down "socialistic and communistic ideas" at work among the people. It is among the parents of the children of the *Volksschule* that socialism finds its strength, so the government very naturally directed the elementary teacher to preach patriotism and conservatism. We quote part of the order<sup>1</sup> because it shows how definitely the aims and purposes of the *Volksschule* are set, which fact we believe to be one of the chiefest points of excellence in the German educational system.

We have thought for a long time of making use of the schools in combating the spread of socialistic and communistic ideas. In the first place it is the duty of the school to lay the foundation for the healthy conception of political and social relations through the cultivation of the fear of God and love of country. But I cannot avoid the conviction that, in a time when socialistic errors and misconceptions are being spread with increased zeal, the school must make renewed efforts toward the advancement of a recognition of that which is true, of that which is real, and of that which is possible in this world. The school must create in the youth the conviction that the doctrines of socialism are contrary not only to God's decrees and Christian moral teaching, but in reality are incapable of application and destructive both to the individual and the state. The school must bring modern affairs more than heretofore into the curriculum, and show that the power of state alone can assure the individual his family, his freedom, and his rights; and impress on the youth how Prussian kings have continually given themselves *pains to better the conditions of the working-class* from the time of the legal reforms of Frederick the Great and the abolishment of

<sup>1</sup> *Allerhöchste Ordre vom 1 Mai, 1889, Zentralblatt*, p. 245.

serfdom down until to-day. Further the school must prove by means of statistical facts how materially and how constantly during this century the conditions of living and the wages among the working-classes have improved under our royal protection.

Another interesting sidelight on the purpose and importance of history is the following:<sup>1</sup>

These regulations do not need a special justification. The German people have the good fortune to possess a Fatherland, a ruling house, of whose history it can be proud. What was said in the time of Frederick the Great holds good to-day. The other nations envy the Prussians their king. The industry and wonderful talent of patriotic historians have gone into all phases of German and Prussian history and presented it in a completeness of form which we have known heretofore only in the history of ancient peoples. There is before us an abundance of stirring events from the story of over five hundred years of uninterrupted labors of the Hohenzollerns for their country and people. It would be base ingratitude toward the ruling house and against those great men, who have dedicated all their power and ability for the state both in war and in peace; it would be a sin against the coming generation, if one should neglect to make it acquainted with the blessings which come to it by virtue of its allegiance to the Prussian state; it would be also an injustice to the state itself, if an unpatriotic race were brought on. Wherefore, all the Prussian kings shall receive a prominent place in the instruction of Prussian youth; and likewise shall the important men, who distinguished themselves in behalf of the king and Fatherland during the Wars of Liberation and those of Emperor William I, be set up as shining examples for the German youth.

VON GOSSLER.

The peculiar thing is, however, that truth is not killed by imperial decree any more than the conditions of industrial life have been really improved by the mandate of the emperors. Authority gives way only under pressure. The result of this decree was that the socialistic forces were just that much the more antagonized, and socialistic principles that much the more discussed. The instruction in history was to

<sup>1</sup> *Min. Erlass.*, 30 August, 1889.

be so changed that the children would hate the name socialism and look upon it as an enemy of the great and glorious Fatherland, which owed its greatness and glory to the Hohenzollern and the Lord. Socialism has come to have so much power that teachers, though they dare not openly avow its principles, neither dare openly to attack the party.

The aim of the instruction in history has already been stated, but we wish to restate it because it is of the greatest importance.

**The Aim of History Instruction** (1) The pupils shall be acquainted with the chief facts in the development of the Fatherland, with the ruling house, and its most prominent members in earlier times, in order that the love of monarch and country be awakened in them. (2) History is to give the children an insight into the political, social, industrial, and moral conditions of the present in order that they may come to respect them. At the same time the children shall study the persons and personalities by whom this historical development was furthered or hindered. (3) History serves in the formation of character. The ministerial order of January 31, 1908, says:

As the aim of history instruction it must be kept securely in mind that the children are to leave school with the most important facts of national history fixed firmly in mind. To insure this, careful drill and constant, regular repetition of the chief dates are necessary.

Now let us see what a typical history course in the elementary school is. History usually begins in the fourth year in school and continues until the end of the school. By an examination of the courses of study in the chapter on school organization, one will find that the work in history begins in the first year of the middle section and receives two recitation periods each week during the next five years. The following outline of topics is taken from the course of study of the elementary schools in Hannover, and is, as far as our observation carried us, fairly representative:

**The Course of Study**

## CLASS 4. FOURTH SCHOOL YEAR

1. The old Germans: Land, dwelling, occupation, education, and character; religion, Wotan, Donar, Ziu, Freya; giants, dwarfs, witches.
2. Arminius, Germany's liberator.
3. The Siegfried myth.
4. The Cundry myth.
5. Charles the Great: Stories of his life and career.
6. Luther.
7. Stories about Frederick the Great, Frederick William III, Queen Louise, William I, Frederick III, and William II.

## CLASS 3. FIFTH SCHOOL YEAR

1. The old Germans: See class 3; tribal division, assemblies, courts, war, and religion.
2. The Romans and Germans in war and in peaceful relations.
3. Tribal migrations (Alaric and Attila).
4. Boniface: The cloister (Marienwerder, Loccuon, cloisters which the children know).
5. Charles the Great: Introduction of Christianity among the Saxons; the courts, imperial administration, coronation.
6. Henry I: Election; building of the frontier forts; victory over the Wendians and Hungarians.
7. Otto I: Victory over the Hungarians; Hermann Billung.
8. Henry IV: Education; struggle with the Saxons; struggle with the pope.
9. Knighthood and the feudal system (Ricklingen and Brünigstein castles).
10. The first crusade. Mohammed.
11. Frederick Barbarossa. Destruction of Milan; Henry the Lion; Barbarossa's death. The results of the crusade.
12. Rudolph of Hapsburg: Struggles against the robber barons; Hapsburg's power.
13. The city of Hannover in the Middle Ages: Founding; Burg Lauenrode; the city in 1400; attack on the city by Henry the Elder of Brunswick; the Hanseatic League.
14. Our ruling family.

## CLASS 2. SIXTH SCHOOL YEAR

1. The most important inventions and discoveries of the Middle Ages.
2. Maximilian I: Introduction of the first imperial tax; the postal system; the internal peace; names of places and people.
3. (For Lutheran schools.) The Reformation by Luther, Zwingli, and Calvin. The Reformation in Hannover.
4. (For Catholic schools.) The division of the church. Luther, Zwingli, Calvin, introduction of the Lutheran faith in Hannover.
- 3 a. (For Lutheran schools.) The Counter-Reformation; the Schmalkaldian War; the Jesuits.
- 4 a. (For Catholic schools.) The religious revival in the Catholic church; the Council of Trent. Missions. Foundation of new orders.
5. The Thirty Years' War: Tilly, Wallenstein, Gustavus Adolphus; Lower Saxony and especially Hannover in the war; the Peace of Westphalia; civilization in Germany after the war (witchcraft).
6. The first Hohenzollern in Brandenburg.
7. Prussian and the German knighthood. Germanization of the eastern provinces.
8. The Great Elector: Youth; foundation of a standing army; accessions by the Peace of Westphalia; his interest in agriculture, commerce and industry; the Huguenots; Wars with France and Sweden; Louise Henrietta.
9. Ernest August, elector of Hannover; his wife, Sophie; Leibniz. George I, king of England (Herrenhausen, the palace of the Guelphs).
10. Frederick I: Acquirement of the kingship.
11. Frederick William I: Personality, his work for the army, finance, elementary schools, governmental administration, agriculture, commerce, and industry; the reception of the inhabitants of Salzburg.
12. Frederick the Great: Youth, the Seven Years' War (chief battles from 1756-1760); first partition of Poland; his interest in agriculture, legal reform, commerce, and industry; system of taxation; life in Sans Souci.
13. Frederick William III: Second and third partitions of Poland. The *Allgemeine Landrecht*.
14. Our imperial house.

## CLASS I. SEVENTH SCHOOL YEAR

1. The French Revolution: Causes, outbreak; Reign of Terror.
2. Napoleon I, the Rhine League. (The occupation of Hannover and the German-English Legion.)
3. Frederick William III and Queen Louise. Prussia's fall. Continental blockade.
4. Prussia's regeneration: Stein, Hardenberg, Scharnhorst. The history of the peasantry, industry, and the army.
5. Resistance to Napoleon: Hofer, Schill, Frederick William of Brunswick.
6. Napoleon's campaign against Russia.
7. The Wars of Liberation: York; appeal to the people; poets of freedom; the allies; battles at Katzbach and Grossbeeren; Leipzig; crossing of the Rhine; Napoleon's fall; the first peace of Paris; Napoleon's return; battles at Ligny and Waterloo; the second Peace of Paris; Napoleon at St. Helena; the Congress of Vienna; Hannover a kingdom.
8. Frederick William III in peace: The *Zollverein*.
9. Frederick William IV: The year 1848; the Prussian constitution; the refusal of the imperial crown; his interest in art and literature.
10. Ernest August and George V of Hannover.
11. William I as king: Bismarck, Roon, Moltke; the Danish War; the German War (Langensalza, Königgratz); the North German League. The Franco-Prussian War: Cause; unity in Germany; the battles at Weissenburg, Wörth, Spichern, Metz, and Sedan; sieges of Metz, Strassburg, Paris, and Belfort; the establishment of the new German empire; peace of Frankfurt.
12. William I as Emperor: Constitution of the German empire; historical development of trade and industry (Krupp and Egestorff), trade and commerce; social legislation; acquirement of colonies, William's death; Empress Augusta.
13. Frederick III.
14. William II: Love of peace; his work for the army and navy and the working classes; campaign in China; revolt in Southwest Africa; civil legal code; Empress Augusta Victoria.
15. Civil Government.
  - (a) History of the school, judicial, and taxation systems.

## (b) The Prussian state.

The rights and privileges of the King. Rights and duties of Prussian citizens. The *Landtag* (legislative body). Administration of the central government. Local self-government. Expenditures and revenues of the state.

## (c) The German empire.

The emperor's rights. Rights and duties of German citizens. The *Bundesrat* and *Reichstag*. Imperial administration. Army and navy. Judicial system. Expenditures and revenues of the empire.

This course of study also prescribes the dates to be learned each year. In all there are fifty-nine dates which the child is supposed to remember and know the significance of, when he has finished the school. One must also remember that, although regular history work begins in the fourth year, the children have had historical myths and stories in the earlier years, as well as having had a great deal about the history of their own city or province either in connection with reading or *Heimatkunde* (q.v.).

As has already been said, there are some of the fundamental facts and principles of social economy and civil government given in connection with history and other subjects, wherever and whenever it seems most advantageous to present them. The following is a further extract from the Hannover course of study<sup>1</sup> covering this point. The place in the course where the subjects are treated is indicated.

1. Work: Forms of work, division of labor, reward and wages. (In connection with the seventh commandment.<sup>2</sup>)

2. Property: Individual and common property. (Seventh commandment.)

3. Money: Valuation, gold coins, paper money, negotiable paper. Savings accounts, banks. — Arithmetic in the first class (eighth school year).

<sup>1</sup> *Lehrplan für die Bürgerschulen der königlichen Haupt- und Residenzstadt Hannover*. Cruse's *Buchhandlung*, 1913, p. 43.

<sup>2</sup> The commandments are arranged differently in the Lutheran catechism.



4. Insurance: Fire, hail, life, military, sick, accident, invalid, and old age insurance. Arithmetic in the first and second classes.
5. Economic conditions in Germany: Geography in the first class.
  - (a) Population.
  - (b) Products (agriculture, animal husbandry, forestry, fishing, mining, house and factory industry. Germany's dependence upon foreign countries).
  - (c) Trade (domestic, imports and exports).
  - (d) Transportation and communication (railways, postal system, telegraph, ship lines, telephone). Arithmetic, first class.
  - (e) Protection of German labor (duties, commercial treaties).
6. History of civil progress. — History, first class.
  - (a) The peasantry; (b) middle class; (c) trade and industry; (d) commerce; (e) army and navy; (f) schools; (g) courts; (h) taxation.
7. The family. Fourth and sixth commandments. First Article.
  - (a) Members of the family; (b) authority and guardianship; (c) registration of marriage, births and deaths; (d) servants; (e) compulsory school law; (f) trade or occupation; (g) the will; (h) the family budget. — Arithmetic in the first class.
8. The community. — Geography in the second class.
  - (a) Meaning and duties of the community; (b) duties and rights of citizens; (c) administration of the community; (d) budget of the community — arithmetic in the first class; (e) the church and community. The Third Article.
9. The Prussian state. — History in the first class.
  - (a) The king's rights and privileges. — (The same as noted above in the history course of study.)
10. The Empire. History in the first class. (The same as above, with a consideration of the courts taught in connection with religion.) Duties toward the life of our fellows: murder, injury, adulteration of food. (Fifth commandment.) The honor and reputation of our neighbor; confidence, falsehood, perjury (second and eighth commandments). The property of our neighbor: theft and deception, embezzlement (seventh commandment).

It will have been noticed that the system in Hannover has only seven classes. Some schools, however, have an eighth

grade or an *Oberklasse*, and when this is the case, the subject matter as we have given it above for the first class is extended a little, a few more topics inserted, and divided into two years' work. In the chapter on chemistry and physics, instead of giving the course for the first class, we shall give a two years' course which is for the first class and the upper class (*Oberklasse*).

School authorities have a very definite purpose which the teaching of history in the *Volksschule* has to accomplish, that is, to instill patriotism, love of ruler, and national pride in the hearts and minds of the children. History must give the children the belief that Germany is the greatest, most cultured, most beneficent nation in the world. Every topic in the course of study is selected with this aim in view. Whether a fact or topic shall or shall not be given a place in the curriculum is judged solely on this basis. A close study of various history courses bears out the truth of this statement. Only after observation of the actual methods employed in teaching history, and of the spirit with which it is done, does one recognize that war and valor are the German's religion, that the greatness of Germany is his ruling desire. The test for every topic in the course is, — Does it function in making the pupil a German in every sense of the word?

As a rule the course in history consists of two sub-courses, a preparatory course and the chief course. The preparatory course in reality begins as far down in the school as the first or second year and covers the third and sometimes the fourth year. The content of this elementary course is fairy tales, stories, and myths of the immediate vicinity, monuments, public buildings of historic interest, and something of the most prominent members of the ruling house. The content of the main course is given above in detail.

In the lower section a subject known as *Heimatkunde* (study of the home) makes preparation for the later work both in

Relative  
Worth of  
the Subject

Two  
Divisions  
in History  
Course

geography and history. Briefly, *Heimatkunde* presents to the pupils all the historical and geographical facts of elementary nature with which the children come in contact, and of which they have heard since infancy. They learn the physical characteristics of the immediate vicinity, of its rivers, bridges, churches, and the most important facts in its history. They acquire also some knowledge of the emperor and his family, and of the ruling house. This work is frequently given in connection with the observation instruction mentioned in the chapter on *German*.

Study of  
the Home  
(*Heimat-  
kunde*)

The course in *Heimatkunde* is often the same as the preparatory course in history during the second and third years, but not after the third year, when a definitely planned history course is given. Some of the topics given in *Heimatkunde* at Hildesheim are as follows:

The Course  
in *Heimat-  
kunde*

1. The governmental district and its neighboring vicinity.
  - (a) The schoolhouse, its location, the directions, the school yard, the street.
2. The city of Hildesheim.
  - (a) The cathedral, myth concerning its founding.
  - (b) The chief post office.
  - (c) Important buildings on Cathedral Square.
  - (d) Streets near the cathedral.
  - (e) Godehardi Square. History of the neighborhood.
  - (f) Godehardi church.
  - (g) District court.
  - (h) New city market and Lamberti Square.
  - (i) Sedan Street and its history.
  - (j) The railway station.

These are only a few of the topics treated in a geographical and historical way. Such a preparation thoroughly equips the children for their future work in geography and history, both of which subjects begin just where the study of the home left off.

Bases of  
Organiza-  
tion of  
Subject  
Matter

One finds the subject taken up in many different ways. Some of the methods of organization will be mentioned. Frequently, the subject matter is treated chronologically. This method is either progressive or regressive. The progressive type is similar to that organization employed in America. Its chief fault lies in the fact that the more recent events are never reached. The regressive chronological method is sometimes employed in the lower classes with very good results, working back, for instance, from the present kaiser to his father, grandfather, and so on.

Some teachers make a slight variation of the progressive chronological order of treatment which emphasizes the sequence of events by laying stress on the contemporaneity of things. This order of presentation is not so good for the elementary school, inasmuch as it is better suited for universal history, which is not adapted for the purpose of the subject in the *Volksschule*.

Occasionally one finds a course of study organized on the group basis, which presents historical material in groups. On this basis events and men of like character or nature are treated together. For example, Arminius, Washington, Kosciuszko, and Julius Cæsar would be studied one after the other. The same plan would be followed with regard to discoveries, inventions, or social reforms. At the end of such a course, the whole is summarized by a chronological review of the topics discussed, and historical principles are thus developed. This plan is now regarded as out of date. It never had very wide acceptance, chiefly because such a treatment tore the historical sequence all to pieces, and tended to cause confusion in the children's minds as to the relation of various events.

The concentric circle plan of arrangement of subject matter is found in very general use to-day in the *Volksschule*. The

subject matter is arranged in three expanding concentric circles, of which the inmost one presents the most important characters and facts of modern, medieval, and ancient times. The second circle presents the less important characters and facts, and intensifies the topics treated before. The third circle includes the least important characters and facts, *i.e.* those which come least often to the attention of pupils. The advantages of this plan are: that pupils who do not finish the whole course of the school become acquainted with the most important historical facts, and that every year new material is treated. The most serious disadvantage entailed by the concentric plan of organization is that the child's psychological nature does not coincide fully with this organization. The majority of the school men in Germany do not hold rigidly to the concentric circle theory in history, but believe that it is necessary that the chief facts be gone over a second or third time in different parts of the course. It is usual to find that a study of the period from the Great Elector on is treated for the second time in the last class.

The Con-  
centric  
Circle Plan

Another form of organization is also found at times, — the combining method. The work in history is made a part of the work in geography, or some other subject. When, for example, the geography of a certain province is studied, the history of that province is also studied intensively. As a result of this method of organization, each of the subjects loses its identity, and neither receives its due attention. The only principle of worth involved here is that history should always have its geographical basis firmly fixed, but this should not be carried to an extreme.

The Com-  
bining  
Method

The Herbartians in Germany reject the concentric circle plan of organization and divide the subject matter in history according to the epochs in the cultural development of the race. According to this plan, new material is treated each

year. In the third and fourth years the children have German myths; in the fifth year, the high points in German national life, such as Arminius, Clovis, Boniface, Charlemagne, Henry I, and Otto I; in the sixth year, the migration of the races, empire and papacy, crusades, knight-hood, the Hanseatic League; in the seventh year, the discoveries, the Reformation, the Thirty Years' War; in the eighth year, Prussian downfall, the War of Liberation, reestablishment of the empire. Only those events are chosen which in the light of present events are educative. This limits the material and topics taken up considerably. The advantages of this organization are: that the particular historical periods chosen can be thoroughly treated because of their limited number, and events chosen in view of their present worth are suited to arouse the interest of the children. At first the topics are generally taken up in the regressively chronological order. Another important thought in this plan of organization is that of "high spots" in history instruction. All the historical material groups itself about the "high spots" in the course, so that the child gets a perspective from which the inner connection of the whole is visible. To take an example:

Rein, Pickel, and Scheller<sup>1</sup> in the treatment of German history begin with Henry I, because his history offers simple relationships. Then follows as the "high spot," Otto I. The thought that the latter took Charlemagne as his model, and the question of how Saxony came over to Christianity, lead backwards to this second "high spot." Boniface won over the German tribes to Christendom, while Clovis won over the Franks. At the end the whole material from Arminius to Otto I is run through again chronologically.

Thus the content is treated only once thoroughly. The starting point is usually an historical poem, and great use is made of the sources.

<sup>1</sup> Schwochow, *Methodik des Volksschulunterrichts*, p. 400.

The Herbartians have rendered great service in developing history instruction in the elementary schools. This school of pedagogical thinkers conceives of history instruction as instruction intended for formation of moral character and assigns it the most important place in the whole curriculum next to religion. According to their plan the historical development is set parallel alongside the development of individuals, the dangers of the concentric circle plan are avoided, the idea of "high spots" is made use of, a preparatory course in myths is afforded, the culture epochs of the racial development are given consideration, sources and poems are helpfully employed, and the teaching is based on the five formal steps.

Not any one of the plans of organization mentioned above is carried out in its entirety in the German *Volksschule*. The courses generally are a composite of all these schemes of organization of subject matter, but one might say that the concentric circle plan, modified somewhat by the Herbartian scheme, is the one most in use in Germany to-day.

The biographical plan in history has to do with the organization, but perhaps more with the manner in which the whole subject is presented. History is considered merely as a series of biographies, the lives of the world's greatest men. This point of view in history is very practical and is widely accepted in all schemes of organization of history subject matter. The biographical treatment of history is particularly applicable in the lower section and it is found in use in nearly all German elementary schools.

Going over from the subject of organization of material to methods of instruction, it can be said at the outset that the five formal steps, as set forth by Herbart and modified by Rein and Ziller, dominate the history work of the present day. Almost every lesson we observed had its steps of preparation, presentation, association, generalization, and

application. Frequently these steps appear only in modified form. The most common type of preparation is a review of the previous lesson. This is generally the case when the lesson is one of a series dealing with a special topic. When the lesson is one that takes up new material, the preparation for the lesson generally finds its starting point in a historical poem, or in historical material treated in an earlier grade. Frequently the preparation or introduction to the new work is tied up with some fact of local interest which is known to all the pupils; for example, names of streets, old buildings, churches, monuments, pictures, folk-songs, children's rhymes. At this point the German teacher usually fails to make use of the child's desire to do independent work, and rarely intrusts the child with working out the preparation by himself. This is one of the great weaknesses of the German system, at least from our point of view. The stenographic lessons at the end of the chapter will illustrate these various methods of preparation.

Teachers who are thoroughly Herbartian generally begin a new topic by reading aloud or having the children read some source material on the point in question. After this has been done, the children and the teacher work out the historical facts and principles together. Only a small percentage of the teachers in the elementary schools follow this plan, because it is thought that the method mentioned takes too much time and is really beyond the ability of the pupils. All teachers readily admit the value of source material in teaching history, but the majority prefer to use the sources only as a means of illustration.

As in other subjects, so also in history, the lecture method of presenting the subject is the most commonly accepted one. This method, however, requires special preparation on the part of the teacher, and is absolutely useless in the hands of teachers



who do not believe heart and soul in the truth of the subject matter which they are presenting. In this particular respect the German teacher is remarkably well qualified, for all of them are intensely patriotic. The American elementary school teachers rarely throw themselves body and soul into the portrayal of an historical situation. Many of our teachers appear ashamed to lose themselves in patriotic enthusiasm, and most of them are incapable of it. One finds no lack of patriotism among the German teachers. Germany is the one great living reality to them. We have never seen a single recitation in history in a German *Volksschule* in which the teacher did not fairly burn with patriotic zeal as he related the story of his country's greatness and glory. They feel that it is their sacred duty to make their pupils patriotic German citizens, and history affords them the best opportunity for this work.

(a) Lecture  
Method of  
Presenta-  
tion

One of the most striking examples of this enthusiasm which it was our privilege to see, was found in a school at S——. It was the 18th of April, 1914, the fiftieth anniversary of the fall of the Düppel forts, during the war against Denmark in 1864. An order had been sent out from Berlin that this day should be celebrated in every school throughout Prussia. The class was composed of about fifty girls in the eighth year (highest grade). The teacher began the lesson by telling the children of the meaning of the day and said that he would read them a poem which dealt with an incident which took place exactly fifty years before the present date. Before he read them the poem he related, with the pupils' aid, the events which led up to the Danish-Prussian War, and gave the reasons which justified Prussia in making war upon its small and weaker neighbor. Next, something was told about each of the German commanders. Then by means of a drawing the teacher described the battlefield and the almost impregnable forts which had to be overcome

by the Prussians and Austrians before the Danes could be beaten. Working gradually toward a climax, and with his voice all tense with emotion, he pictured the night before the battle, the terrific cannonading, and the final assault which won the day. The success of the assault was determined by a private who sacrificed his life to make a breach in the wall by exploding a sack of powder which he was carrying. The poem dealt with this incident.

The teacher knew the poem, which was six or seven stanzas in length, and recited it with fervor and enthusiasm. Each stanza ended with the lines,

*Der Feind ist geschlagen  
Und Schleswig ist frei.*

Next he repeated the first stanza twice and then called on one of the girls to try to repeat it, which she did very creditably. Then the whole class repeated it with the teacher, and again individually. The entire class learned three stanzas in the one hour. After the class was dismissed, the girls, while walking in the corridors, were heard repeating the poem and emphasizing particularly the recurring lines,

*Der Feind ist geschlagen  
Und Schleswig ist frei.*

Although the German teachers exhibit great enthusiasm and patriotism in their work in history, they also stick very closely to the historical truth in the matter. Though the emperors and kings are praised, their faults are also spoken of. Their virtues, however, outweigh their faults. This is another point our American history teachers would do well to remember, particularly in treating the Civil War.

(b) **Historical Accuracy** A visitor is struck with the excellent delivery shown by the German teacher in presenting material to his pupils. The presentation is fluent and dignified, and always

(c) **Delivery**

in such language as is fitted to the comprehension of his hearers. This type of teacher is the general rule. There are some who declaim and thunder at their classes and give one the impression more of a Fourth of July orator than a school-teacher.

The next two steps are ordinarily united in present-day practice. This in general amounts to a series of questions upon the material which has been presented and any necessary explanations, just as in other subjects. Illustrations of this can be found in the stenographic lessons. Source material is often used at this point to clarify some topic. Poems and selections from the reader are used by way of intensification of treatment. Most of all the teacher makes use of review. For example, if the lesson is about compulsory military service, the topic can be tied up to, and compared with, related topics going back as far as the *arrière-ban* among the early Germans, and the reorganization of the army after the peace of Tilsit down to the present time. The broad conclusions are generally drawn by the teacher and are learned merely as any other fact is learned. Very little opportunity for independent thought is given.

This step is very frequently not formally taken up at all. The whole process is in a way its application. The application is generally to show the greatness of Germany, how the kings have taken care of their people, and how the people may benefit from patriotic, faithful service. Frequently, the application is made by asking the pupils how this or that historical event affects them or the social fabric in which they live. Sometimes moral lessons, which are drawn from the lives of historical personages, are applied to the lives of the children. In the main, however, the application touches some phase of that citizenship which is the best possible for the German state.

3 & 4. Association  
and Generalization

5. Application

No matter what the general theory of instruction may be, repetition claims the largest part of the time. The teacher gives the pupils the information and then requires them to repeat it, summarize it, and repeat it over and over again until he is satisfied that they know the facts thoroughly. The observer is not always convinced that the children know the meaning of what they have recited, but it is certain that they know facts. As aids in this repetition the teacher frequently writes the chief dates on the board, as well as several sentences which summarize the different topics in the lesson. The ministry in Berlin requires that the children know the most important facts and chief dates in their national history. Usually these facts and dates are drilled while the topics are being discussed, and also at other times as an independent drill exercise, entirely divorced from all subject matter. Repetition forms a part of almost each lesson. The first ten minutes of each hour is usually devoted to a review of previous work. A general repetition of the main points is required at the end of the treatment of each large topic.

Whatever may be said for or against this type of teaching, it gets the result desired, for the children do acquire the facts, and from the process they get a large portion of German patriotism, although they might acquire a still more reasonable patriotism if they were not required to spend such a large part of their time in memorization and were allowed to think and act for themselves.

There is no separate history text-book. The *Realienbuch* is a science reader which contains sections on history, geography, biology, physics, chemistry, and physiology. These books are usually adopted throughout the whole of an administrative county, although an entire province may use the same text. This science reader is seldom read by the pupils at all. Many pupils have told us that they never read in it

more than once or twice a month, and then only for review. A series of topics, generally the commonest facts in history, are briefly treated in this book. The children have little use for the text-book, because the teachers present to them in class the same material and more of it, and usually in much better form. These texts are rarely ever illustrated, and in case they are, only very poorly. As far as we observed, the children in the German school would be just as well off without the *Realienbuch* as with it, as far as the history section is concerned. In this respect the Germans surpass us. They are not slaves to a text-book. The reason is plain to see. Their teachers are trained, while many of ours are not, and hence we need a text, in order that the children may at least learn something. The Germans have also something to learn in regard to text-books, because a good text-book is a help even to a highly trained teacher.

A section of the German reader is given over to history, in which are to be found fables, myths, biographical sketches, and historical selections in prose and poetry, which <sup>History in</sup> are used to supplement the regular historical material <sup>the Readers</sup> given by the teacher or found in the *Realienbuch*. The historical selections found in the German reader are generally of a better character than those found in the *Realienbuch*, because the former are generally written by standard writers, while the latter are not.

Besides these two sources of history material, there are quite a number of historical readers, which are used in a supplementary way. This practice is not very general. None <sup>Historical</sup> of the history text is used to any extent to help the <sup>Readers</sup> child prepare his lesson. He learns his lesson in school from his teacher, and then uses the text to supplement what he has gotten there.

The spoken word of the teacher does more than anything else to make the history instruction concrete. It is the best

means of illustration which one finds in the work in the *Volkschule*. The story or event as related by the German history teacher is vibrating with life. It paints the event in vivid colors. The battle, the charge, or the storming of the fortress appears in their childish imaginations as almost real. The map is one piece of material which is invariably present. Any one acquainted with the excellence of German maps will understand what a valuable aid the maps are in history work. A boy is never allowed to talk about a place of which he does not know the location. Naturally history is very closely correlated with geography, and the teacher never fails to show the way in which history has been affected by geographical phenomena or principles. Maps are largely used to explain the expansion of Prussia. Such maps are usually arranged in series, or so printed in color that the pupils can see at a glance the territorial growth of Prussia and the German Empire. Then one sees a great many maps used to show the plans of famous battles.

When maps are not practicable, the teacher takes advantage of his ability to draw. If the map does not show the arrangement of troops in the battle, the teacher simply sketches it on the board and simplifies his work immensely. There are also a great number of printed sketches or plans of battles, campaigns, expeditions, and the like, which many teachers use quite extensively.

Historical pictures are also used. Every German schoolroom has a picture of the present emperor, and generally Emperor William I, the present empress, and Bismarck. Some rooms have other famous Germans. Besides pictures of individuals almost every school possesses pictures to illustrate life among the early Germans: feudalism, knights, old German towns, famous battles, fortresses, and many other topics of historical interest. Such illustrative material is published

very cheaply and in great quantities, so that there is scarcely a school, in the town or in the country, that does not have a sufficient supply.

A few of the larger cities have school museums, while almost every city of any considerable size has general museums with collections of educational interest. One of the best school museums is located at Hannover. It contains collections of ethnological characters, miniature models of the old German home, the German camp, the old Roman city, and the like. The general museums usually are much better equipped for history work than are the school museums, which devote most of their collections to the study of geography and the natural sciences. One finds ordinarily in the city museums historical paintings, cannons, flags, weapons of all sorts, statues of famous men, all of which make very excellent illustrative material for the elementary history work. School excursions are frequently made to the museums, just as they are to places of historical interest, and with very excellent results. The time for such excursions is taken from the regular school work, though occasionally these trips may fall on the free afternoons.

Closely bound up with the history work is some instruction in practical citizenship. It deals with the rights and duties of the citizen. This work is generally handled in the hour assigned to history, but such is not always the case. The general course of study rarely contains an outline of the topics to be treated, but the necessary points are usually scattered through the history course. The subject is a mixture of the elements of civics and of economics (*Volks-wirtschaftslehre* and *Bürgerkunde*).

The course given below outlines the topics usually taught which relate to civics or political economy.

Course

1. Work: kinds, division and reward (the seventh commandment).
2. Property: individual and common.

3. Money: gold, silver, paper, notes, bills of exchange, banks, savings institutions (given in arithmetic in the eighth year).

4. Insurance: fire, hail, life, military, sick, accident, invalid, old age insurance (arithmetic, eighth year).

5. The economic conditions in Germany (geography in eighth year).

(a) Population.

(b) Products: agriculture, animal husbandry, forestry, fisheries, mining, home industry, factory industry, Germany's dependence on foreign countries.

(c) Commerce: domestic trade, imports, exports.

(d) Transportation: railroads, post, telegraph, telephone, steamships.

(e) Protection of German labor: tariffs, commercial treaties.

6. Development of social institutions: (History, eighth year). Peasant class, citizenship, and suffrage, industry, commerce, and trade, transportation, army and navy, school system, courts, and taxation system.

7. The family: members of the family, guardianship, registrar's office (marriages, deaths, births), servants, compulsory school attendance, occupations, wills, and family budget (arithmetic, eighth year).

8. The community: meaning and purpose of the community, duties and rights of the citizens, income and expenses of the community, administration of the local government, church relationships of the community.

9. The Prussian kingdom: rights and privileges of the king, rights and privileges of Prussians, the house of representatives (*Landtag*), state administration, income and expenses.

10. The German empire: the rights of the emperor, rights and duties of Germans, the *Bundesrat* and *Reichstag*, imperial administration, army and navy, income and expenses; judicial system, which treats of the duties of one to his neighbors' life (murder, bodily injury, and adulteration of foods); duties relating to the honor and good name of one's fellows (trust, falsehood, and perjury); duties toward our neighbor's property (theft and deception).

Each one of these topics is taken up in the subject where it fits best and is clearly discussed and explained. There is no attempt made to explain to these children of the *Volksschule*



all the unending intricacies of German government. Enough is explained to enable a citizen of the lower class to understand in a fundamental way those parts of the governmental system with which he comes in intimate contact. Aim

The pupil is brought to recognize the valuable protection and good which the state furnishes him, and he is taught very specifically that he owes certain obligations to the state for that protection. If the state assures the safety of his home and city, he must be willing to serve in the army which affords the protection.

The pupil acquires here a very definite idea of respect for law and authority, and he acquires actual practice in respecting law and authority in his daily life, for German laws are respected and they are enforced. And it is just at this point that the most striking difference between America and Germany exists. We run along without ever thinking much about the law, while the Germans are a law-directed people. It extends down into the little things of life which might be annoying to us, but which might improve our standards somewhat if we would do the same things on our own initiative. The German does not tear up paper and throw it in the street; he does not litter vacant lots with garbage and refuse; he does not steal flowers or disfigure shrubbery in public parks; and he does not do a great many other uncouth things which we do here in America. It is not, however, due to a rigorous supervision by the police *now*. The present-day German has been educated out of such things. Somewhere he has acquired a certain sort of civic pride which requires him to protect and respect public property. Somewhere he has acquired a civic pride which makes him keep his home neat and in good repair. One would have to search diligently in Germany to find a tumbledown town or village, while one has to search infinitely more to find one in America that is not dilapidated wholly or that has not some dilapidated

section. The German law does not require such spick and span cities. It is the German ideal, obtained somewhere in their system of education, that performs these miracles, and the course in civics and economics contributes to quite a large extent this quality of civic pride and responsibility which is so urgently needed here in America. The German begins by having his school and church as clean and attractive as limited means will permit. How does it contrast with our school and church? Though our condition in regard to appearance of public schools is rapidly improving, we are now in many respects far behind the Germans.

History teaching in the *Volksschule* calls for too little activity on the part of the pupil. The protagonists of the "work-school" (*Arbeitsschule*) charge the ordinary school-teacher with believing that his task is accomplished when the children have acquired certain facts, names, and dates. From our observation this is often true, and almost all of the teachers of history insist on a great deal of memory work, but at the same time they redeem this fault by their intense patriotism and enthusiasm. Though the whole effect of the work in history makes the German child patriotic and conscious of his country's greatness, his individuality is left dwarfed and undeveloped by lack of opportunity for independent thought. One hears a great deal of talk about developing the individuality of the children, but one rarely finds opportunity in a *Volksschule* for the children to really express themselves. In the *Arbeitsschule* at Dortmund we saw a real attempt to let the pupils do things for themselves in history. They drew their own maps, they made their own sketches, they modeled their own forts in the sand table and tried to give some expression to the historical conceptions which they had acquired.

As far as the purposes of governmental and national policy are concerned, history is the most important subject in the

entire elementary school curriculum. In trying to make an estimate of the worth of the subject, it can be said that it fully accomplishes its purpose in making patriotic Germans out of the pupils in the *Volksschule*. Naturally, history is not the only factor that contributes to this end, but it is the most important one. The German government started out a half century ago with the intention of making its citizenship the most intelligent and the most chauvinistic in the world, and it has accomplished its purpose. Herein lies the lesson for America. We must fix our national purposes and then mold the coming generations definitely, concretely, toward that end.

Conclusion

## HISTORY. FIFTH YEAR

*Teacher:* What prince were we speaking of last time?

*Pupil:* We spoke of Emperor William I.

*Teacher:* What relation was he to Emperor William II?

*Pupil:* He was the grandfather.

*Teacher:* Tell me of the youth of William I.

*Pupil:* His early youth was very happy, but during the time of Prussia's defeat he was sad because he saw his mother weeping. The French were in the land and the Prussians could not save it. The queen was forced to flee, but she still trusted in God. She said, "Because we have deserted Him, have we been cast down."

*Teacher:* Who was the eldest brother of William I?

*Pupil:* His eldest brother was Frederick William IV.

*Teacher:* When did he reign?

*Pupil:* He reigned from 1840 to 1858.

*Teacher:* Why didn't he reign until 1860?

*Pupil:* William I was appointed regent on account of his brother's illness.

*Teacher:* William I was thoroughly a soldier. How old was he when his brother died?

*Pupil:* He was 61 years old.

*Teacher:* What wars did he wage?

*Pupil:* He waged the Danish War.

*Teacher:* Tell me the first events of the Danish War.

*Pupil:* In the fifteenth century the duke of Schleswig-Holstein died. They invited the King of Denmark to become duke, but Schleswig

and Holstein were not to be divided. After the Second Peace of Paris, Holstein was taken up by the North German Federation. The Danes . . . I don't know.

*Pupil:* The Danes oppressed the Germans in Schleswig. In 1863 the king of Denmark died, and his successor, Christian IX, called Schleswig a Danish province. This was contrary to the agreement, for Schleswig and Holstein were not to be divided.

*Teacher:* What did Germany do?

*Pupil:* Germany and Austria attacked Denmark, and sent an army under Graf von Wrangel and Prince Frederick Karl.

*Teacher:* In February the army advanced into Schleswig. The Austrians went to the west, and the Prussians to the east, Prince Frederick Karl tried to go around the Danes. He fought them at Misshunde and then advanced to Arnis. The Danes then retreated, and stopped at Düppel, where they had very strong fortifications. It was necessary to capture this fortress because it shut off all access to upper Denmark. In front of the fortifications was a broad level plain, which the Germans would have to cross before they could deliver an attack. The question was, — How could the Germans get troops close enough to make an effective storming of the ramparts and barricades? The German commander had trenches dug in zigzag directions toward the forts. Why do you think he had this done?

*Pupil:* I suppose because the trench would never be open to fire from the forts and the Germans could thus approach them without coming from cover.

*Teacher:* This work took a long time, but at length the trenches were within a short distance of the forts. On the night before the attack the Prince ordered all the men to rest. At five the next morning he ordered all the artillery to open fire upon the forts. This cannonading continued until ten o'clock sharp. All at once it ceased, and the word for advance was given. Like a flash the men were out of their trenches and were in the breaches in the fortifications that the artillery fire had made. Many of our brave soldiers fell and the outcome was in doubt. To make a breach that would admit our troops was of greatest importance. A common soldier, Klinke by name, carried a sack of powder on his back. He saw that if he exploded it, a hole would be torn in the defenses, but that it would cost him his life. Did he hesitate? No! The breach was made, but there was not a piece left of the poor, brave soldier. In a very short time the Danes retreated and the victory

was ours. The Danes soon made peace and Schleswig-Holstein became a part of Prussia. Who were the commanders of the Germans and Austrians?

*Pupil:* Graf von Wrangel and Prince Frederick Karl.

#### HISTORY. EIGHTH YEAR. BOYS

*Teacher:* How did Emperor William I seek to avoid the disadvantages which the growth of industry brought his people? The accumulation of great amounts of capital by individuals, the exploitation of the unemployed, and the like aroused the discontent of the workingman and endangered domestic peace and harmony. How did the workingman show his discontent?

*Pupil:* By strikes.

*Teacher:* What were the results?

*Pupil:* Property was destroyed, the employee got no work, and the employer earned nothing.

*Teacher:* How did Emperor William try to avoid this danger?

We learn that from a message sent by Emperor William in 1881 to the imperial parliament. It runs as follows: (reading) We would look back upon all the success with which God has blessed our reign with so much the more contentment, if we could have the consciousness of having left behind for the Fatherland new and lasting assurance of its inner peace, and greater surety and lucrativeness of assistance to the needy and helpless, which is their due. In our efforts in this direction we are assured of the approval of all the federated governments and of the support of parliament without party differences. In this connection, the bill concerning the insurance of employees against accidents which has been submitted in this session by all the federated governments, will be submitted to reconsideration and modification, in order to work out the new deliberation thereon. Supplementary thereto a bill will be introduced which will propose a similar organization of industrial sick fund system. Also those who become incapacitated through age or invalidism have a well-founded claim on society for a greater amount of state aid than they hitherto have been able to obtain. Prince Bismarck, at whose instance this legislation for the protection of the working classes was introduced, fought for these proposals in parliament, and it was through his efforts that these laws were adopted. When in the deliberation over the matter it was held up to him that it would cost twenty-five millions of dollars to put

the accident insurance law into effect, he replied, "It wouldn't frighten me, if it were to cost seventy-five millions. . . . According to my opinion, a state, whose majority of citizens are confessors of the Christian faith, should be active and concerned in caring for the poor, the weak, and the old." His efforts succeeded in putting these laws into effect. To be sure this did not happen all at once, but only gradually, and the great emperor did not live to see the fulfillment of his wonderful plans. The industrial legislation was first finished under Emperor William II. How has the imperial message been fulfilled?

*Pupil:* Sickness, accident, invalid, and old age pensions have been introduced for the protection of employees.

*Teacher:* What is the purpose of insurance against sickness?

*Pupil:* Every employee is required to take out sickness insurance. The employer must register his workers, and pay the premiums for them, although he may withhold from their wages their share of the premiums.

*Teacher:* What benefits does this type of insurance assure?

*Pupil:* It protects the workingman and his family in case of sickness from dire need; it assures his dependents a certain amount of support, for they receive a certain sum of money upon the death of the support of the family. The amount received varies with the amount of the wages which the employee earned.

*Teacher:* What is the purpose of accident insurance?

*Pupil:* It is to protect the worker and his family from necessity. But accident insurance, the cost of which has to be borne by the employers, also protects the life and health of the employees, because the employers are compelled to take all sorts of safety precautions, so that accidents cannot happen so easily.

*Teacher:* Let us look at statistics and see if the number of accidents has really decreased. (The teacher read the figures to show that the number of accidents had fallen off to a large extent.)

*Teacher:* Why have they introduced old age and invalid insurance in addition to those already mentioned?

*Pupil:* This insurance is to protect the employees from need who have become permanently incapacitated through accident or old age.

*Teacher:* But were such measures necessary?

*Pupil:* Certainly, first, in the interest of the state, because we have learned that the internal peace and external power are endangered by the discontent of the masses.

*Teacher:* What else?

*Pupil:* It is necessary in the interest of the working classes whose down-trodden conditions and whose vocation demand such care from the state.

*Teacher:* What other reason is there for this insurance?

*Pupil:* It is necessary in the interest of our industry, because it demands, for a further healthy development, a contented, work-loving, strong, laboring class. Then, too, it was a commandment of brotherly love to care for the old, weak, sick, and infirm.

*Teacher:* Why were the employers made to bear a part of the expenses?

*Pupil:* The employees help them earn their wealth, so it is only right and just that the employers help care for their employees.

*Teacher:* Give me a sentence to summarize the lesson.

*Pupil:* The emperors have caused legislation to be passed for the protection of the working people.

#### HISTORY. CLASS I. EIGHTH GRADE (REVIEW)

*Teacher:* The aim of the lesson is to show how the emperors have continued the efforts of their illustrious ancestors in behalf of the welfare of the people.

*Teacher:* What illustrious ancestors are meant?

*Pupil:* The Great Elector, Frederick William I, Frederick the Great, and Frederick William III.

*Teacher:* In what way did these emperors further the general welfare of the people?

*Pupil:* Frederick the Great did much for the agricultural life of his people, and established a great army.

*Teacher:* What value did these efforts have?

*Pupil:* They brought great blessings to the people.

*Teacher:* In what way have the emperors furthered the welfare of the new empire?

*Pupil:* The restoration of commerce, the introduction of protective tariffs and commercial treaties, imperial postal service, founding of colonies, increase and improvement of means of transportation, such as canals, railroads, steamship lines, and the like.

*Teacher:* Why did the emperors have to look out for the improvement of commerce and industry?

*Pupil:* The conditions arising from political reasons seriously affected the commerce of all of the German states. There was no Customs Union and each state sought to get the advantage of its neighbor.

Uniform commercial regulations were necessary for the welfare of the people and the unity of the empire.

*Teacher:* How did the emperors seek to help?

*Pupil:* The imperial postal system was organized.

*Pupil:* Then protective tariffs were introduced.

*Teacher:* Why were the protective tariffs introduced, and why were commercial treaties drawn up?

*Pupil:* The hurtful influence of foreign competition, which was injurious to German industry and agriculture, was to be removed. The hindrances which kept back our industry and commerce were to be removed. In this manner the welfare of the nation was to be advanced.

*Pupil:* New countries were opened up to exports. The exportation of goods to other countries was made easier, while importation was made more difficult.

*Teacher:* In what way were commerce and trade made easier?

*Pupil:* Commerce and trade were made easier by the establishment of the imperial postal system, imperial railroads, steamship lines, and canals.

*Teacher:* In what way did these new things improve business?

*Pupil:* It made trade much easier, more simple, cheaper, and afforded quick exchange, and transportation of goods.

*Pupil:* Commerce was made possible with all countries by the establishment of imperial steamship lines. Regions which were previously shut off were opened up to trade. German sea-trade was increased and protected.

*Teacher:* What influence did these peaceful efforts have upon Germany's international position?

*Pupil:* The inner unity increased Germany's outer position as a world power. Germany was respected in the councils of the nations and was feared throughout all Europe.

*Teacher:* Will some one summarize what we have said?

*Pupil:* The German emperors have increased the general welfare of their people through the establishment of a postal system, commercial treaties, protective tariffs, railways, canals, and steamship lines. These efforts made Germany firmly united.



## CHAPTER XIX

### GEOGRAPHY

STANDING in very close relationship to history both in content and in method, geography holds a very important place in the curriculum of every German elementary school. To one who has observed the German schools, it is a matter of extreme difficulty to discuss geography apart from history, because these two subjects are always most intimately associated with each other. In the first three or four years of the school there is no attempt to teach history and geography separately, but the material of historical or geographical nature that is considered suitable for the lower section of the school is given under the name of *Heimatkunde* (knowledge of the home).

The purpose of instruction in geography is first of all a practical one. Geographical knowledge is a necessity for the ordinary man under the commercial and industrial conditions of to-day and these times of the German expansion in colonization, trade, and industry; and it is the duty of the *Volksschule* to satisfy this necessity in an acceptable manner. On the other hand, geography serves pedagogical purposes as well; for if presented in the proper way geography is not merely a matter of memorization, but has an effect on the imagination and the understanding, thereby becoming an educative instrument.

These are the words of a leading German educator of to-day and they are the truest words ever written of the purpose of a vast amount of the work done in the elementary schools. The aim is a practical one, looking toward the commercial, industrial,

<sup>1</sup> Schowchow, *Methodik des Volksschulunterrichts*, p. 432.

and colonial expansion of the German Empire. Geography is studied to show the children the industrial greatness and the industrial necessity of the Fatherland. Every item in the course of study in geography aims at the inculcation in the child's mind of an idea which is calculated to make him a more patriotic German, a German who sees the need of national conservation and defense and expansion across the seas. The work in geography is merely supplementary to that in history. It furnishes the material with which the child is made to justify the aims and ideals of his native land.

France is studied largely to acquaint the German child with his traditional enemy. South America is studied more closely than North America because in that continent the German ultimately hopes to gain a foothold. Routes of travel to the Near East are considered carefully because the German has long looked with desire on the riches of the Ottoman Empire and Egypt. The natural resources of the Fatherland are very plainly discussed to show that the Empire can feed itself for only two hundred eighty days of the year in normal times. On account of this fact the German feels justified in being an expansionist.

It goes without saying that the German teacher has other ideals than these practical ones to be attained by instruction in geography, but they are all subordinate to that of German nationalism.

Friedrich Ratzel holds a very prominent place among German geographers who are devoting themselves to the elementary school. His most important books are *Anthropogeographie* and *Die Erde und das Leben*. As far as method is concerned, he has laid aside that of comparison and has put the "where people live" and "why they live there" in the chief place of importance in the geography of the *Volksschule*. He has made the home of prime importance and a point of departure. He has done away with

a too complete dependence upon the map through which the geography had become very mechanical and lifeless.

As nearly as we can ascertain, the following principles lie at the basis of the work in geography in the *Volksschule* at the present time.

1. A knowledge of the formation of the land of any particular country constitutes primarily the basis of the geographical instruction.

2. Portions of the earth's surface, which in regard to their climate, structure, animal and plant life form a unified whole, are called *natural landscapes*, upon which physical and political geography are built.

3. Man and his occupations are the most important phenomena upon the earth's surface. Consequently the geography of *kultur*, which seeks to find the geographical conditions upon which civilization is built, holds an important place in elementary school geography.

4. The principle involved in *home geography* shall be carried throughout the course.

5. The self-activity of the pupil is necessary. On this last point the German schools fall down and one is led to doubt if the teachers really desire the pupils to exercise any self-activity.

The Berlin course of study outlines the following work in geography.

Class 5. (fourth year in school). Home geography dealing with Berlin. The Province of Brandenburg. Observation of the heavens. **Course of** (This work has already been begun in the lower section as a **Study** part of the topics in *Observation Instruction*.)

Class 4. General view of the continents and oceans. Germany. Observation of the heavens; apparent movements of the sun, moon, and stars; phases of the moon; its relation to the sun; eclipses of the moon.

Class 3. Countries of Europe. Daily and yearly movement of the sun. Movement of the moon and its phases.

Class 2. Foreign countries and continents with especial reference to German colonies and protectorates. Concluding work in the geography of Germany with particular emphasis upon natural resources.

Class 1. The economic conditions in Germany. Germany's position in world commerce. The latitude of different places; the equator, the poles, tropics, and polar circles. Shape of the earth. The globe. Geographical

latitude and longitude. Rotation of the earth. The sun's orbit. The moon. The solar system. Fixed stars. The universe.

In Hannover we find another course of study.

Class 6 (second year). Home geography. The schoolhouse. The school district.

Class 5. Home geography: The city of Hannover and its environs. Observations of the heavens.

Class 4. The province of Hannover. Germany in broad outline. Continuation of the study of the heavens: daily course of the sun; day and night; varying length of day and night; seasons of the year; phases of the moon.

Class 3. The earth: distribution of land and water on the earth's surface; the equator; the zones; hemispheres; continents and oceans. Europe in broad outline. Germany. Continuation of the study of the heavens; rising and setting of the sun; heating of the earth in different seasons; apparent form of the heavens, the horizon; the polar star.

Class 2. (a) Foreign continents with special emphasis on the German colonies. (b) The province of Hannover, which includes a discussion of state and local government and the judicial system. (c) The city of Hannover: the meaning and duties of the community; duties and rights of citizens; administration of the city; income and expenses of the city; sanitary regulations; commercial, charitable, and educational institutions; industry; churches. (d) Study of the heavens; shape of the earth; dusk; apparent course of the sun in the four seasons.

Class 1. (a) Other countries of Europe. (b) Germany; population, production (agriculture, animal husbandry, forestry, fishing, mining, industry, foreign relations and the colonies); commerce (domestic and foreign); transportation (railways, post, telegraph, telephone, and steamships); protection of German labor (customs and commercial treaties). (c) Study of the heavens: movement of the earth; solar system; the moon. (d) General geography, climate, weather, erosion, and the like.

The courses of study as given above indicate in a general way the nature of the work done in geography in the elementary school. Home geography claims most of the time in the third and fourth years, while formal geography is taught in the remaining four years. The work is considered from many points of view, chiefly, however, from its historical

and economic sides. According to the theory of German geographers who deal with the subject for the *Volksschule*, the physical phases of geography should receive the major portion of the teacher's attention, but observation has led us to believe that the political and economic viewpoints receive by far the larger part of the time. It must not be concluded, however, that the essentials of geography are neglected. A glance at the above courses shows at once that the main geographical principles are taken up, not only once, but several times.

No other subject is used as freely for purposes of correlation as is geography. In religion a very large amount of formal geography or map work is introduced. If the child had no other geography work, he would receive from the hours spent in religion a very thorough knowledge of Egypt, Asia Minor, Palestine, Greece, Rome, and Germany. The map and illustrations are always used in religion lessons dealing with countries or places mentioned in the Scriptures.

Correlation  
with Other  
Subjects

Geography is likewise correlated with reading much in the same way that we use geographical readers in this country, except that the geographical selections are an integral part of every reader. In Hirt's *Lesebuch*, part 3, one hundred fifty pages, out of a total of five hundred sixty-three, are devoted to geography. These selections deal with the home, the Fatherland, the German colonies, foreign countries, and astronomy. When these selections are read in the German recitation, a study of the map and use of illustrative material are always a part of the work. A great number of the geographical readings have a nationalistic trend which appeals to the child's patriotism and love of country. The following paragraphs are taken from a reading lesson which was used to supplement the study of Alsace-Lorraine. This same material could be used equally well in history.

In the revolutionary wars the French conquered the remainder of Alsace and thereby the whole western mark became French.

The new masters did everything to make friends of the inhabitants of Alsace-Lorraine. They encouraged agriculture, commerce, trade, and industry by means of new roads, canals, and railways. Especially through the Vosges they built roads in order to turn the faces of the Alsatians toward France. Metz and Strassburg were more strongly fortified; they were to become the iron claws which were to hold the land for France. Thus the French succeeded in drawing the inhabitants over to their side, only they were not able to force their tongue upon the German population. Although the official language was French, the mass of the people spoke German at home and thus remained German at heart.

Then came the war of 1870-71 which the French brought on so recklessly. For punishment therefor the stolen provinces were taken back again. All of Alsace and all of Lorraine and a little more were won back for the new German Empire.

The proud abbey at Strassburg and the lordly cathedral at Metz look no longer toward the West, but eastward toward the German lands, and the inhabitants of Alsace-Lorraine have learned to feel happy again as Germans under the protecting scepter and loving care of the German kaiser.

Geography and history are more closely correlated than any other subjects, as can easily be understood. The selection just given above is typical of the geographical-historical selections used in a supplementary way. Both subjects grow out of *Heimatkunde*, which is both elementary history and geography. History is called upon continually to give life and motivation to the geography lesson. The children are never allowed to forget that it is *German* land, a part of the Fatherland, that they are studying. It is very difficult to find any spot in Germany that has not been intimately connected with Germany's political development. This fact, inasmuch as a patriotic citizenship is one of the chief aims of education, is enough to arouse the child's interest, for there is no child who is not vitally concerned in knowing why Germany is *the greatest nation* in the world.

Elementary science is also employed to vitalize the geography instruction. The trees, plants, minerals, and animals which are commonest in Germany are studied in beginning botany, zoölogy, physics, and chemistry, and all this is brought in to aid in geography. The correlations made are not accidental, but carefully planned to save time in teaching.

Reference to the foregoing courses of study, particularly the one of the Hannover schools, shows a very great amount of time given to the economic phases of geography in the last years of school. This is put at the last of the <sup>2. Economic</sup> Geography course for several reasons. First, because the child would scarcely be able to understand it at an earlier age, and, secondly, because the State wishes to leave a firm impress of Germany's position, power, and needs upon the youthful citizen who is about to leave school. These topics are treated from another point of view in the history and civil government course (*Bürgerkunde*). This type of work in geography has great value for the type of citizen which the State demands, in that it provides a definite kind of knowledge which every intelligent citizen must have. There is not much theory involved; it is generally a plain statement of facts, selected to show what Germany's power and resources are, and to show what are the duties and rights of the State, the community, and the citizen. It must be said that the teachers who give this work, in all instances observed, never overstate the facts. They merely ignore facts concerning other countries. It must be admitted that a great many superlative statements in regard to Germany can be truthfully made.

In spite of all theory to the contrary, a large portion of the time in geography is given over to the study, that is, <sup>3. Political</sup> the memorization of political divisions and boundaries, Geography rivers, capitals, and the like.

Although the larger part of the course in geography is given

over to economic and political geography, the physical side of the subject is amply taken care of. One of the good features of geography in the schools in Germany is that the children are not overburdened with more physical geography than they can understand. Only the most essential and fundamental principles of geography are discussed, and then very simply and very clearly. Mathematical geography is taken up in a very brief way in connection with arithmetic in addition to being treated in a few lessons in the upper geography classes. Reference to the courses given above will show how much attention is given to the phases of geography treated in this paragraph.

One finds quite a number of methods used in the organization of the subject matter in geography, all of which may be observed in daily use in the schools. The subject matter treated is very much the same in all *Volksschulen*, and it is selected generally on the basis of the principles mentioned above, which resolves itself finally into teaching the child the most necessary things about his own home, his province, the state, and the outside world in so far as it concerns Germany. Several of the methods of organization of this subject matter will be mentioned. The courses selected above are the most typical, based on the concentric-circle theory of organization, modified, however, to some extent.

The analytic method of treatment proceeds from the general to the particular. The child begins with the earth, then takes the continent, the country, the state, the province, and the city in turn. Physical, political, and economic geography follow each other. The majority of German educators do not hold to this organization because they think it does not correspond to the experience of the child, and puts off a treatment of the home and state to the last of the course.

4. Physical  
and Mathe-  
matical  
Geography

Methods of  
Organiza-  
tion of  
Subject  
Matter

The  
Analytic  
Method



The synthetic method is just the reverse of the analytic. Modifications of this method are in most common use in the *Volksschule*. This happens to be the most current form of organization in America at this time. The order of topics is usually the schoolhouse, the home, the city, the district, the province, the state, the rest of the world. Among the prominent methodicians of Germany who have used this organization are Harnisch, Diesterweg, Henning, and Gude.

The Syn-  
thetic  
Method ;

The correlative method of organization in geography is carried out rigidly in very few schools, but is used more or less in all for pedagogical and administrative reasons. This organization is used from a pedagogical standpoint because a child can learn the geography of a place more easily, and remember it longer, if at the same time he learns some of its history. From an administrative standpoint it saves a great deal of time to organize subject matter on a correlative basis. Herbart, Ziller, Rein, and Göpfert have rendered great service to the *Volksschule* along these lines. According to this principle if in the fifth year in history the child studied Henry IV, Barbarossa, the Crusades, the spread of Christianity on the Baltic Sea, and Rudolph of Hapsburg, he would study the Alps, Italy, the Balkan peninsula, Asia Minor and Palestine, the Baltic provinces, Switzerland and Austria in geography. Many of the German teachers with whom I have talked say that the danger in this organization is that geography loses its identity through correlation with other subjects. In spite of this danger this plan of allowing one subject to bolster up and help out another is one of the best features of the German schools. We talk a great deal about correlation in this country, but there is very little real correlation done. If a point of correlation happens to come up, our teachers take advantage of it, but there is not much conscious and intelligent planning for the proper type of correlation.

Correlative  
Method

The concentric circle theory of organization in geography is used in some form or other in practically all German *Volks-schulen*, which fact does not interfere at all with correlation or with the use of the synthetic scheme of organization. In the lowest section of the school the whole field of geography, of course, only in barest outline, is taken up; in the middle section, the same material is treated still more intensively, and increased in difficulty and richness according to the needs and abilities of the child; and it is all gone over again, with added content, in the upper section of the school. This method of organization is particularly valuable for several reasons. First, it is valuable because the child retains subject matter better if it is gone over several times; and second, it is valuable for those children who never reach the seventh or eighth grade, in that all the important topics have been taken up previously at least twice.

For example, in the geography course in Hannover (p. 432), the city of Hannover was taken up in grades two, three, six, and seven; Germany was discussed in grades four, five, and seven; and the province of Hannover was treated in grades four and six. This does not take into account the treatment these topics receive in other subjects than geography, from which it is readily seen that the really important items are thoroughly handled. They are studied in such a way that when the child leaves school, he knows his own home and country much better than does the average American child.

The methods employed in the classroom are very different from those that are used in America, but are very similar to those used in teaching the other subjects in the German *Volks-schule*. The following instruction from the Ministry serves as a good starting point for a discussion of methods of teaching in geography. "Dictations<sup>1</sup> are not allowed. Likewise a purely

<sup>1</sup> General Regulations, of Oct. 15, 1872.

mechanical drilling of names of countries and cities and statistics is forbidden. Instruction is to start with observation, which is made possible by use of the globe and the map." Attention is called here to a stenographic lesson in geography printed in this chapter (p. 445), which furnishes us a great deal of light on this and other points having to do with methods in geography. This lesson is very typical of all geography work in the German *Volksschulen*. We have fully thirty lessons like the one cited and all were taken at random in very widely separated parts of the Empire. The lesson was taken in April, 1914, in Steglitz, a suburb of Berlin.

This lesson contains no dictations. The map and globe were both used; the map was used very freely and well. The reader is left to judge as to how much drill of places, rivers, mountains, and seas was done. We believe that this lesson is sufficient comment on the method in geography. It must not be concluded for an instant that the lesson was a bad one. On the contrary, there are many things in its favor: 1. No home work was required. 2. The children acquired a set of facts which the Ministry had decided was necessary for them to know. 3. They were offered opportunity to contribute something to the lesson. 4. They had some review work and proved that they had retained what they had learned in the same manner, previously. 5. The teacher accomplished everything he set out to do. Every child learned something about France and learned it in a way to retain it. 6. The children used good German. 7. They acquired no false impressions.

On the other hand, the children exercised no initiative. They did no organization of subject matter. There was no provision made for individuality. There was no judging by the child relative to the worth of statements or subject matter. These things may be very desirable in America, but the work must be judged from the German viewpoint. The German government

is not at all concerned in cultivating initiative in the lower classes; the government has no desire to make any provision for individuality among the classes where it desires to have uniformity in thought and opinion; the government decides about the relative worth of facts, and the people must accept the evaluation.

The lesson referred to is the best single explanation for the uniformity in thought and action in Germany that we know of. In such wise is the thought of the lower classes cast and fixed. The method is sure and invariable.

The word *Heimatkunde* is best translated as study or knowledge of the home. It is a well-grounded principle in German pedagogy that that which concerns the local community should occupy the most important place in all subjects. When we speak of *Heimatkunde* with reference to geography, we have in mind an independent subject with special hours assigned to it in the third and fourth years of school, and sometimes in the second. It differs from observation instruction in the first year of school in that observation instruction deals with particular places and makes no attempt to develop general ideas, while *Heimatkunde* prepares the way for geography by teaching the child what a hill or a river is. Methodicians maintain that *Heimatkunde* is largely geographical and is only supplemented by the history which is always given with it. Nevertheless *Heimatkunde* is to all intents and purposes a mixture of history and geography, with the emphasis on the geography.

The aim of *Heimatkunde* is that the child shall learn about his home through direct contact with things in his native vicinity, that he learn thereby a few fundamental geographical ideas and that he learn a little about the use and purpose of a map.

The method employed is Pestalozzian. The teacher takes his children to the place he wishes them to study, they observe it,

describe it, and draw what they have seen if possible. The teacher naturally supplements all this observation with whatever historical material is necessary. The time for these excursions is taken from the regular school hours, Method although frequently the children go in the afternoons after school. Some teachers object to taking the children Excursions because the teacher is responsible in case any child is injured. These excursions are generally called walks, and are taken sometimes in the country and other times just about the city. Of course such excursions are not limited to the *Heimatkunde* of the third and fourth years, but are continued throughout the school course. Aside from the instructional phase of the excursions, they often assume a little of the picnic spirit, especially when they are out in the country. It is a very common sight to see a teacher with his children returning from a walk at evening, singing some patriotic song or *Wanderlied*. Although the excursions are sometimes informal in appearance, the teacher always has a very definite plan in mind as to the ideas which he wishes the children to acquire, and ordinarily there is a fixed plan as to the number and order of trips to be made.

The best work which we observed along this line was in the *Arbeitsschule* at Dortmund. This school is a regular *Volksschule*, but is called the *Arbeitsschule* because the methods employed in the school are entirely different from those of other German schools. Here the children learn by doing, by working rather than by mere memorization. Practically everything taught in this school is studied first through direct contact and observation. All the work in German, geography, science, drawing, manual training, and arithmetic is based on knowledge that the children have acquired on excursions or walks.

In addition to using the excursions as a basis for classroom discussion in geography, the teacher in this particular school at Dortmund made them the foundation upon which the study of

maps was built up. The children drew sketches of the playground, the schoolroom, the neighboring streets. One lesson we observed followed an excursion up a little valley to the east of Dortmund. On their return the boys worked out a relief map of the landscape on the sand table, placing rivers, hills, forests, and villages. It need not be said that this work was all done by the pupils — the one school we had the pleasure of visiting in which all the children were exercising a large degree of individuality. There are several schools of this type in Germany, but the percentage is very small indeed.

The German teacher usually has no other aid in geography than maps, but of these has always had an ample supply. The child has no text-book<sup>1</sup> — except there is a section of the *Realienbuch* (p. 416) which is devoted to geography. There is also, as has been said, a portion of the reader devoted to geographical matter. The geography section of the *Realienbuch* is somewhat similar to the subject matter of our own text-books in geography. The only difference in their use is that the American child studies his geography text-book, while the German child does not. The latter very rarely uses the *Realienbuch* for the reason that the teacher himself always presents the subject matter to be learned. (See p. 416.)

A German schoolroom always has access to wall maps of all continents, both political and physical, maps of the empire, the kingdom, the province, the city, and the district. A small school in Pomerania had the following maps :

- |                                   |                          |
|-----------------------------------|--------------------------|
| 1. Palestine.                     | 7. Berlin.               |
| 2. Map for Old and New Testament. | 8. Sedan.                |
| 3. Palestine (modern).            | 9. Germany (Physical).   |
| 4. Stettin.                       | 10. Germany (Political). |
| 5. Northern heavens.              | 11. Africa (Physical).   |
| 6. Randow (Kreis).                | 12. Africa (Political).  |

<sup>1</sup> In some cities one may find text-books in geography.

- |                                |                                 |
|--------------------------------|---------------------------------|
| 13. North America (Physical).  | 22. German colonies.            |
| 14. North America (Political). | 23. Pomerania (Political).      |
| 15. Europe (Physical).         | 24. Pomerania (Physical).       |
| 16. Europe (Political).        | 25. Middle and Southern Europe. |
| 17. War of 1870-71.            | 26. South America.              |
| 18. Brandenburg (Hist.).       | 27. Eastern Hemisphere.         |
| 19. Australia.                 | 28. Western Hemisphere.         |
| 20. Prussia (Political).       | 29. Oder River.                 |
| 21. Prussia (Physical).        | 30. Social geography chart.     |

It is the common practice to have all the above maps in the German schools. The German teacher depends very largely on his maps to help him out in his work. A German map, to one who can read a map, is equally as good as most text-books in geography and the children readily acquire great facility in their use. Not only do they have an abundance of wall maps, but each child has a small school atlas, which means much more to the German child than the supplementary reading in the *Realienbuch*. A child in the upper grades can pick up an atlas or look at a good map and tell nearly all there is to know about a country without ever having read a word in a book. The maps of local districts are particularly good. From one which was used in the school mentioned above, the child can really acquire an immense amount of information by being able to read the legends on the map. By a glance at the map he can tell: where all the railroads are; the elevation of all places; the local distances to within a few yards; the kinds of roads, whether they are paved or laid with cobblestones; the automobile roads or bicycle paths; all post offices; whether a road has shade trees in case he wishes to take a walk; where he can get refreshments along the road; where he can buy gasoline; where the churches or graveyards are located; where the brick factories, windmills, water mills, and monuments are situated; where the swamps, meadows, heather, planted fields, pine forests, and beech forests are. That is about all one would require of a map.

The map is by no means the larger part of work. The teacher is the source of all information, except what the child may have happened to acquire. The method employed is much the same as that in history. It is almost entirely oral instruction. The teacher tells the children the fact which he wants them to learn, and as soon as he has said it, he calls on the children to repeat it. The stenographic lesson illustrates the method. In the *Arbeitsschule* at Dortmund the children exercised much more initiative and always gave their own experience before the teacher made his contribution. This latter method is much more like that which we use here in America.

In one or two schools visited there were stereopticon machines installed for use in all subjects, but particularly in geography and history. The principals of these schools seemed to believe that stereopticon views and moving pictures could become a great educative factor if the views and films were prepared on psychological and pedagogical principles. There seems to be much in favor of the introduction of some such plan in our schools more generally than is now the case. The teachers in the German schools used the views to illustrate the material which they were presenting to the children.

German teachers always have some concrete or objective material before the child. The map is always there, and when a child speaks of a place, he is unfailingly required to point to it on the map or some other child must do it for him. Sometimes the teacher draws on the board a map of the region of which he is speaking, and frequently the children are also required to make such maps. There is very little drawing of maps on paper such as we do in America.

The school museums, of which the best are in Hannover and Berlin, serve a very excellent purpose in geography teaching. In these museums are ethnological, biological, geological, and historical collections. The teachers take



their classes to these museums as often as there is a demand or opportunity for such work. This is another feature of the German schools which we would do well to adopt.

The former and present-day practice in geography in Germany is in spite of all their theory a memorization of places, names, areas, and the like; a learning of a great number of facts more or less necessary. Such will always be the case until the *what*, *how*, and *why* are emphasized more than they are at present. It will never be any better until the principle followed in the *Arbeitsschule* at Dortmund, where the child's self-activity was regarded, finds wider practice. All the instruction must be based on reality, and the subject matter must concern the child's present and future needs, in this case, his own locality and Germany. The children must be given a chance to work with things, make maps, construct models, and carry out simple experiments which underlie fundamental geographical principles. Among the good points in the geography work of the *Volksschule* the definiteness and conciseness of the course is probably the best. Not too much is attempted. Every topic has a definite purpose, in keeping with the aim of the entire school program. The teachers are well prepared; they have good control of subject matter. The maps are not to be excelled. The method used gets the results which are desirable in Germany — acquirement of facts.

Conclusion

### GEOGRAPHY. III CLASS. FIFTH YEAR. BOYS

*Teacher:* Where do we live?

*Pupil:* We live in Europe.

*Teacher:* What is your Fatherland?

*Pupil:* Germany is my Fatherland.

*Teacher:* All together, — Germany is our Fatherland.

*Pupils:* Germany is our Fatherland.

*Teacher:* Who is our *Landesvater* (father of the country)?

*Pupil:* Emperor William II is the father of our country.

*Teacher:* Why is he called *Landesvater*?

*Pupil:* Because he rules the German fatherland.

*Teacher:* No.

*Pupil:* Because he cares for the land and its people as if he were the father.

*Teacher:* Yes. He cares for the land as a father cares for his children, whence comes the name. What is the emperor called? All together.

*Pupils:* The emperor is called *Landesvater*.

*Teacher:* Germany is shut in by many other lands. What country is to the west?

*Pupil:* France.

*Teacher:* We shall hear something about this country to-day. What country are we to hear about to-day?

*Pupil:* We shall hear about France to-day.

*Teacher:* Once more.

*Another Pupil:* We shall hear about France to-day.

*Teacher:* All together.

*Pupils:* We shall hear about France to-day.

*Teacher:* What is the name of this country?

(Teacher had written the name on the board.)

*Pupil:* France.

*Teacher:* Who has ever heard of it? (Several hands were raised.)

What have you heard?

*Pupil:* It is a republic.

*Teacher:* All together: France is a republic.

*Pupils:* France is a republic.

*Teacher:* What is a republic?

*Pupil:* A republic has no king, only a ruler.

*Teacher:* Not exactly.

*Pupil:* France is not ruled by a king, but by a president.

*Teacher:* Who is the ruler of Germany?

*Pupils:* The *kaiser* is the ruler of Germany.

*Teacher:* And after his death who will be the ruler?

*Pupil:* The crown prince.

*Teacher:* And how is it in a republic?

*Pupil:* The president is elected by the people as often as they wish.

*Teacher:* Yes, in a republic the president is elected for some four or five years and he may be elected more than once. He rules only for a certain number of years. How long does a king rule?

*Pupil:* A king rules for life.

*Teacher:* What are the boundaries of France (pointing to the map)?

*Pupil:* The Bay of Biscay and the Pyrenees and . . .

*Teacher:* The west boundaries of France are the Atlantic Ocean and the Bay of Biscay; on the south the Pyrenees and the Mediterranean Sea; on the east, the Alps, the Jura, and Germany; and the northern boundaries are Belgium and the English Channel. Give the boundaries of France. (A pupil pointed to the boundaries while another pupil recited.)

*Pupil:* The western boundaries are the Atlantic Ocean and the Bay of Biscay, the southern boundaries are the Pyrenees and the Mediterranean Sea; the eastern borders are the Alps, the Jura, and Germany; on the north are Belgium and the English Channel.

*Teacher:* Now let us consider the east boundaries of France more closely. They are the Alps, the Swiss Jura, and the *Argonnen Wald*. All together: The eastern . . .

*Pupils:* The eastern boundaries are the Alps, the Swiss Jura, and the *Argonnen Wald*.

*Teacher:* Now one pupil alone give the boundaries on the east.

*Pupil:* The eastern boundaries of France are the Alps, the Swiss Jura, and the *Argonnen Wald*.

*Teacher:* Now give me all the boundaries of France.

*Pupil:* The western boundaries of France are the Atlantic Ocean and the Bay of Biscay; the southern are the Pyrenees and the Mediterranean Sea; the eastern boundaries are the Alps, the Swiss Jura, the *Argonnen Wald*; and Belgium and the English Channel on the north.

*Teacher:* What you told me of France was not very much. Can any one give me the name of a ruler of France?

*Pupil:* Napoleon I.

*Pupil:* Napoleon III.

*Teacher:* What wars did Napoleon I wage?

*Pupil:* The wars against Prussia one hundred years ago.

*Teacher:* What wars did Napoleon III conduct?

*Pupil:* The Franco-Prussian War in 1871.

*Teacher:* Have the French and Germans gotten along well together?

*Pupil:* No, they have had many wars with one another.

*Teacher:* Yes. Now we must study and find out more about this country, because we may have trouble in the future with them! The chief rivers of France are the Loire, the Rhone, the Garonne, the Maas, the Mosel, and the Seine. Repeat that.

*Pupil:* The chief rivers of France are the Loire, the Rhone, the . . .

*Teacher:* Garonne.

*Pupil:* . . . the Garonne, and the . . .

*Teacher:* Seine (giving it the French pronunciation).

*Pupil:* . . . the Seine, the Maas, and the Mosel.

*Teacher:* All together (pointing to the rivers).

*Pupils:* The chief rivers of France are the Rhone, the Loire, the Garonne, the Seine, the Maas, and the Mosel.

*Teacher:* What mountains are here in the South of France?

*Pupil:* The Pyrenees.

*Teacher:* On the east of France are the Alps, the Jura, the Argonnes, the Sevens. The Sevens stretch up as far as the Mosel. Repeat that.

*Pupil:* The mountains in eastern France are the Alps, the Swiss Jura, the Argonnes, and the Sevens.

*Teacher:* Repeat that once more. These mountains in here are the Vosges.

*Pupils:* The mountains in eastern France are the Alps, the Swiss Jura, the Argonnes, the Vosges, and the Sevens.

*Teacher:* Where are the lowlands of France? (No reply.) The lowland plain of France reaches from the Pyrenees to Belgium. Repeat that.

*Pupil:* The lowland plain of France reaches from the Pyrenees to Belgium.

*Teacher:* Repeat that again.

*Pupil:* The lowland plain of France reaches from the Pyrenees to Belgium.

*Teacher:* There is another lowland (valley) along the Rhone.

(The song "*Deutschland, Deutschland, über alles*" was then sung, presumably because the boys were getting a little sleepy.)

*Teacher:* What is our Fatherland?

*Pupil:* Germany is our Fatherland.

*Teacher:* Who is our kaiser?

*Pupil:* William II is our kaiser.

*Teacher:* What can we call him?

*Pupil:* We call him the *Landesvater*.

*Teacher:* What country are we studying to-day?

*Pupil:* We are studying France.

*Teacher:* What border of Germany is France?

*Pupil:* France is the western border of Germany.

*Teacher:* What is the capital of France?

*Pupil:* Paris is the capital of France.

*Teacher:* What is the best train for Paris? (No reply.) The best train for Paris passes through Hannover, Cologne, and Brussels. Repeat that.

*Pupil:* The best train for Paris runs from Berlin through Hannover, Cologne, and Brussels. (It was repeated again.)

*Teacher:* The best water route from Berlin to Paris is down the Elbe to Hamburg, then through the North Sea and English Channel to Havre, and then by rail to Paris. Or one may go by way of Boulogne instead of Havre. Give me the boundaries of France.

*Pupil:* The boundaries of France on the west are the Atlantic Ocean and the Bay of Biscay; the southern boundaries, the Mediterranean Sea and the Pyrenees; the eastern boundaries are the Alps, the Swiss Jura, the *Argonnen Wald*; Belgium and the English Channel are the northern boundaries.

*Teacher:* Give me the chief rivers of France.

*Pupil:* The chief rivers of France are the Rhone, the Garonne, the Loire, the Seine, the Maas, and the Mosel.

*Teacher:* Repeat that. (Calling another pupil.)

*Pupil:* The chief rivers of France are the Rhone, the Garonne, the Loire, the Seine, the Maas, and the Mosel.

*Teacher:* What are the chief mountains of France?

*Pupil:* The mountains of France are the Alps, the Jura, the Vosges, the Argonnes, and the Sevnnes. (Repeated by another pupil.)

*Teacher:* Give me the lowlands of France.

*Pupil:* The chief lowland of France reaches from the Pyrenees to Belgium. The other plain is along the Rhone.

*Teacher:* If we take a look at the general shape of France, what form do we find it to have?

*Pupil:* It is quadrilateral.

*Teacher:* Yes. There are two peninsulas. Normandy. Say that.

*Pupils:* Normandy.

*Teacher:* And Brittany. Pronounce that.

*Pupils:* Brittany.

*Teacher:* These peninsulas used to reach out and join England to the continent, but the North Sea broke through. What was the result?

*Pupil:* England was then an island.

*Teacher:* What lands used to be joined?

*Pupil:* England and France used to be joined.

*Teacher:* What divided these countries?

*Pupil:* The North Sea broke through and separated them by the English Channel.

*Teacher:* What body of water separates England and France?

*Pupil:* The English Channel (*Ärmel Kanal*).

*Teacher:* Why is it called the *Ärmel Kanal*?

*Pupil:* Because it has the shape of a coat sleeve.

*Teacher:* The narrowest part of the channel is at Dover straits. Where is the narrowest part of the channel?

*Pupil:* The narrowest part of the channel is called the Straits of Dover.

*Teacher:* What are the chief peninsulas of France?

*Pupil:* The chief peninsulas of France are Brittany and Normandy.

*Teacher:* What have we talked about to-day?

*Pupil:* We have talked about France.

*Teacher:* What was the name of the early inhabitants of France?

*Pupils:* The Franks.

*Teacher:* Who was their king?

*Pupil:* His name was Charles the Great.

*Teacher:* Give me the boundaries of France.

*Pupil:* The boundaries of France are the Atlantic Ocean and the Bay of Biscay on the west, the Pyrenees, the Mediterranean, and the Gulf of Lyon are the southern boundaries; and France is bounded on the east by the Alps, the Swiss Jura, the Argonnes, the Vosges; and on the north by Belgium and the English Channel.

*Teacher:* Name the chief rivers of France.

*Pupil:* The chief rivers of France are the Rhone, the Garonne, the Loire, the Seine, the Maas, and the Mosel.

*Teacher:* Give the name of the mountains in France.

*Pupil:* The Alps, the Jura, the Vosges, the Argonnes, and the Sevens.

*Teacher:* Where do we find the Sevens?

*Pupil:* The Sevens extend from the Pyrenees to the Mosel.

*Teacher:* Where are the lowland plains of France?

*Pupil:* The great lowland plain of France is in the western part of the country and extends from the Pyrenees to Belgium.

*Teacher:* Give the names of the chief peninsulas of France.

*Pupil:* The chief peninsulas of France are Brittany and Normandy.

*Teacher:* Repeat that together.

*Pupils:* The chief peninsulas of France are Brittany and Normandy.

*Teacher:* Why is the channel called the *Ärmel Kanal*?

*Pupil:* It is called the *Ärmel Kanal* because it has the shape of a sleeve.

*Teacher:* What did we study about before vacation?

*Pupil:* We studied about the Balkan countries.

*Teacher:* What are the Balkan countries (pointing at map)?

*Pupil:* The Balkan states are Turkey, Bulgaria, Roumania, Servia, Bosnia, Montenegro, Albania, Herzegovina, and Greece.

*Teacher:* Repeat that, some one else. (It was repeated again.)

*Teacher:* Who is the new prince of Albania?

*Pupil:* Prince William of Wied.

*Teacher:* Yes, he is a German prince. What is the capital of Albania?

*Pupil:* The capital of Albania is Durrazzo.

*Teacher:* What is the capital of Turkey?

*Pupil:* Constantinople.

*Teacher:* Give me the route by train from Berlin to Constantinople.

*Pupil:* The train passes through Dresden, Prague, Vienna, Belgrade, Sofia, Adrianople, and Constantinople, and the name of the train is the Oriental Express.

*Teacher:* How do you go to Constantinople by water?

*Pupil:* One may go to Trieste by train and then by boat through the Adriatic Sea, the Ægean Sea, the Dardanelles, the Sea of Marmora, and then the Bosphorus.

*Teacher:* What other water route is there?

*Pupil:* One may start from Hamburg down the Elbe, through the North Sea, the English Channel, the Atlantic Ocean, the Straits of Gibraltar, the Mediterranean Sea, the Ægean Sea, the Dardanelles, the Sea of Marmora, and the Bosphorus.

*Teacher:* Tell me what you know of Constantinople.

*Pupil:* The churches have no bells and instead of spires they have minarets. They are called mosques.

*Teacher:* How are the faithful called to prayer?

*Pupil:* A priest calls the people from the minaret.

*Teacher:* Constantinople lies on the water. Of what meaning is that?

*Pupil:* It is a great commercial city.

*Teacher:* Yes. Its harbor is one of the best in the world. What is the capital of Greece?

*Pupil:* Athens is the capital of Greece.

*Teacher:* What is the seaport of Athens?

*Pupil:* It is Piræus.

*Teacher:* Who is the queen of Greece? (No answer.) She is the sister of our emperor.

## CHAPTER XX

### BIOLOGY

*Naturgeschichte* (natural history), consisting of botany, zoölogy, and physiology, is a separate subject of instruction in all German *Volksschulen*. It is one of the *Realien*. The subject is generally first begun in the first year of the middle section (see p. 247) and is continued two hours a week throughout the remaining classes of the school, although the number of hours may be somewhat less in some of the years. The total number of year hours rarely exceeds ten. Of course, some plants and animals have been superficially studied in the lower section, but only incidentally or as subject matter for observation instruction.

The course of study varies somewhat according to the location of the school. Rural schools would naturally have a different course from city schools. The following course is typical. It is customary to have botany and zoölogy in alternate semesters throughout the course.

Class 6 (third year, lower section). In this class there is no real study of biology, but preparation therefor is made by observational studies of flowers and trees, as the apple, chestnut, tulip, wind rose, honeysuckle, bean, and sunflower. The horse, cow, cat, dog, chicken, rabbit, sparrow, stork, and beetle are studied.

Class 5 (fourth year, middle section). I. Relation of simple organs and their uses. II. Observations and experiments. Plants in school garden. House plants. Care of plants. Development of the tulip and the bean. A fish in the school aquarium. Development of the butterfly. Field



excursions. III. Topics: (a) Tulip, wind rose, strawberry, cherry tree, lion's tooth, house plants, fuchsia, begonia, cress; peas and beans, cabbage; (b) starling, frog, bat, mole, swallow, butterfly, deer, fox, pig, squirrel, woodpecker, otter, owl, swan, bear, elephant, camel.

Class 4. I. Biological characteristics of plants, and especially of blossoms. Biological characteristics of animals, especially the relationships of bodily structure, habitat, and manner of living. Biological groups. Classification of plants and animals into groups of the natural systems. II. Observations and experiments: plants of the school garden. House plants. Care of plants. Experiments in germination. Growth of cuttings and twigs. Prevention of pollination and artificial pollination of fuchsia and Alpine violet blossoms. Dissemination of seeds. Water plants and lower forms of animal life in water (snail, mussel, water insects, water weed, water lentil, and flea-crab). Field excursions. III. Topics: (a) Forest: oak (foliage trees), scotch pine (conifers), red ant, lizard. (b) Field: rye, flax, poppy, carrot, potato, field mouse, lark, crow, burying beetle. (c) Meadow: meadow grasses, pastureland, common mushrooms, bees, fishing worm, garden spider. (d) Heath and moor: heather, bog-moss, buckwheat. (e) Water: crabs, snails, mussels, mosquito, dragon fly.

Class 3. I. Further study of biological characteristics of other forms of life. Some lower plants. Some lower animals and some articulate animals. Characteristic animals of other zones. Study of human body and its hygiene. Some exotic plants. Half a year is given to the last three topics. II. Experiments and observation. (a) Microscopic studies of the spores of the mushroom, the fern, or moss; study of yeast, moldy yeast, seaweed (algæ) from the school aquarium, hair, vegetable fiber, fungi of the mouth, blood corpuscles. (b) Products of the colonies in the commercial and school museums. (c) Sanitary regulations of the city, street cleaning, sewerage, hospitals, public gymnasiums and playgrounds, baths, vaccination, dental clinics, parks, forest and meadow reserves. III. Topics: Brake or shield-fern, maiden-hair fern, moss, toadstool, yeast, fungi, house fly, silk moth, trichina and tapeworm, parasites of the human body, lower animals of the aquarium, monkey, whale, ostrich, herring, sea-fish, human skeleton, muscles and their functions, blood and its circulation, respiration, nutrition, foods (cocoanut palm), luxuries (tobacco, coffee, tea, spices), alcohol, grapes, care of teeth, alimentation, sense organs and nerves, body temperature and its regulation by means of clothing, infectious diseases, work and play, results of dissipation.

Class 2. I. The most important facts of botany and physiology.

II. Observation and experiments dealing with plants and plumules to form the basis of botany. Embryo plants in nutritive solutions. Water weed exposed to sunlight. Test for starch with iodine solution. Cuttings. Microscopic work with fatty cells, milk, and leaves of plants. Sanitary arrangements of the city. Plants in the garden and house. III. Topics: (a) Structural elements of plants, assimilation of food by plants, respiration of plants, circulation of sap in plants. (b) Care of the limbs of the human body, sport, homes for cripples; hygiene of the vital organs, food, air, homes for infants. Alcoholism and temperance societies. Dental hygiene, dental clinics. Hygiene of the circulatory and respiratory apparatus. Homes for tubercular cases. Hygiene of the skin, eyes, ears, baths, asylums for the deaf, dumb, and blind. Hygiene of the nerves, institutions for epileptics, and insane hospitals. Regulation of body temperature. Influence of weather and climate. Acclimatization. Contagious diseases. Vaccination. Hospitals. Quarantine houses. First aid to the injured in cases of wounds. Burns, hemorrhages, drowning, asphyxiation, freezing, fainting. Red Cross. Work and recreation. Evil consequences of dissipation. Dwelling.

Class 1. I. Continuation of the work in botany of Class 2. Structural elements of plants, protective features of plants, bushes, and trees of the locality. II. (a) Skeleton of man and animals compared. Skeleton of a mammal, a bird, a fish, and a turtle. Skeleton of the coral and the sponge. The lower animals. (b) Muscles and their relation to movement. Organs of movement of animals, mobility of bones and tendons. Organs of motion of animals in the air, in the earth, in water, in trees, on the ground. (c) Blood and its circulation in man and in animals. Elements and color of blood. The heart of different classes of animals. (d) Respiration in man and in animals. Respiratory system. Respiration through the lungs, gills, trachea, and skin. Cold- and warm-blooded animals. (e) Nutrition of the human body. Foods. Alcohol. Dental hygiene. Poisons, Nutrition of animals. Method of nutrition, flesh and plant eating animals. Juices of meats and plants. Organs of nutrition: hand, foot, paw, claw, teeth, beak, tongue, spittle, stomach, crop, intestine, osmosis, alimentation. (f) Human nervous organism. Nervous systems of animals, especially the eyes of vertebrates and insects. (g) Protective arrangements of animals against cold, water, enemies. (h) Multiplication of animals. Living young. Eggs. Metamorphosis in amphibia, articulate animals, worms, and trichinæ. Division and budding among lower animals. Classification of animals.

The course of study in biology and physiology just given is for a large city. In cities where there are separate schools for boys and girls, the topics chosen during the last two years are not the same for both types of schools. The needs of each sex are considered in making such a course. In some places the girls have no physics or chemistry, or at least not so much as the boys, and in these cases they usually have a little more extensive course in physiology, and in the botany of food plants. Physiology as a rule receives about twenty lessons in each of the last two years.

Course for  
Boys and  
for Girls

This course typifies those given in practical German *Volks-schulen*, both in the city and in the country. Naturally the amount of time spent on each topic varies with the locality and how great an intimacy the children have with plants and flowers before coming to school. The striking thing about the course is its usefulness. In the whole list there is not one topic about which the children should not be informed; in fact, about which it is not almost necessary for them to know. Not many plants or animals are discussed within any one year, but a few are treated very thoroughly. Very few of the plant or animal types are entirely new to the children, for many of them have been observed and studied superficially in the lower classes.

Nature of  
the Course

There is no special text-book for this subject. A portion of the *Realienbuch* (see p. 394) is devoted to the description of plants and animals and to a discussion of physiology and hygiene. The book, as in other subjects, is very little used. The text generally deals briefly with each of the topics discussed in class, but offers nothing more than a summary of the work. The teacher rarely ever refers the pupils to the text-book until the topic has been presented and thoroughly discussed in class. Many teachers have told us that no text was necessary so far as they were concerned. Children in va-

Text-books

rious schools have frequently told us that they never used their science reader more than once or twice during the year and then for review. The significance of all this is that the sources of information are the teacher and the study of the various plants and animals. The text-book itself is generally poor, judged by American standards. Our text-books have developed to a high degree of perfection because we have to depend on them to make up the deficiencies of our teachers. Consequently, we study books too much. On the other hand, the Germans fail to see the use to which a good text may be put. A great deal of time is wasted in their schools on account of the lack of good science texts. This is true of other subjects as well.

German *Volksschulen* are excellently equipped for teaching elementary science, particularly biology. Every school that we

**Material** visited had a collection of prepared animals and birds and mounted models of plant life. In addition to the specimens of the plant or animal being discussed, the school generally has illustrative maps, charts, or pictures, covering every animal or plant studied. For example, for the study of the honeybee, a school will have a box in which specimens are mounted showing the embryo bee, its growth and development, how the comb is made, how honey is gathered, and all other activities connected with the life of the bee. Besides this the school has pictures to illustrate the kinds of bees, their habitat, reproduction, and activities.

Thus it is for every topic taught in biology. The instruction is made as objective and concrete as possible, for the children always have some observational material on which to base their work.

In the cities, each school has its supply room in which the **Apparatus** material for the general use of the whole school is **Rooms** kept. Care is exercised in the purchase of biological supplies that duplications are not made in purchasing and that

specimens purchased shall serve as many classes as possible. A teacher is assigned to look after this room and is made responsible for the condition and preservation of the collection. It is needless to say that the material in these rooms is systematically arranged, so that it will always be ready for use.

Between the recitation periods the head boy of the class goes to the apparatus room and secures the articles necessary for the next recitation. Everything is on hand when the recitation begins. Within our observation it never occurred that a teacher had forgotten to secure a model, map, or chart which was needed in the recitation. This is merely German foresight and method.

In the country biology is taught even more successfully than in the cities. The collections of specimens are never so rich or varied, but they are always sufficient and are generally made by the pupils themselves. Very frequently, where in the city stuffed models of animals and mounted specimens of plants are necessary, natural specimens are to be had in the country.

Biological  
Supplies in  
the Country  
Schools

The poorest teaching anywhere in the *Volksschulen* is done in biology and in the other elementary sciences, but particularly in biology. It is not that the teachers do not give the children enough facts, but it is the way in which they are given. The teachers have no lack of observational material, but they do not allow the children to observe. It was very seldom that we heard the teachers ask the children, in taking up a new plant or a new animal, what they knew about it, what they had experienced with it, what they could see. Almost invariably the teacher made all the observations and required the children to make the same ones and to talk about no other. Questions from the children were exceedingly rare. But as we have said in many other places, it is not the aim of the German *Volkschule* to make individual thinkers of the common classes.

Methods of  
Instruction

Biology aims chiefly to teach the children an appreciation and knowledge of themselves and the living world about them.

**Aims** Sex education in the elementary schools is taught by  
**Sought in** teaching the sex relationships of plants and of animals.  
**Biology** This is always done delicately and simply, so that almost unconsciously the child acquires knowledge of himself and the sex relationship.

Biology is tied up with almost every subject in the curriculum, particularly literature, composition, language, geography, and drawing. The correlations made are always natural and are never artificial, except in a few cases. In the lesson on the eagle, given in this chapter, attention is called to the attempt on the part of the teacher to impress on the children the kingly attributes, the greater worth of the nobility. Thus the schools are made to establish the doctrine of kingship among the people and convince them of its naturalness and justice.

The lessons appended show the methods usually employed in biology. They were selected at random from a large number of lessons. We believe they show that the main difference between such work in our schools and the German schools lies in the method employed. We also believe that it is the general use of such methods which produces the German type of contented citizenship, patriotic and non-individualistic, in contrast to our freer, more independent, restless American.

#### BIOLOGY. CLASS III. SIXTH YEAR

*Teacher:* We shall review plums to-day. What is the best ground for plums? (Had chart of plum blossoms and fruit.)

*Pupil:* Moist and protected ground is best for plums.

*Teacher:* Where do we get plums from besides our native land?

*Pupil:* We get plums from Asia.

*Teacher:* What other fruits do we get from Asia?

*Pupil:* We get dates, figs, and other tropical fruits.

*Teacher:* What is the shape of the plum leaf?

*Pupil:* It is an ellipse.

*Teacher:* When does it bloom?

*Pupil:* It blooms in May.

*Teacher:* How is the blossom protected in winter?

*Pupil:* The bud is protected in winter by a thick covering.

*Teacher:* When does the bud begin to swell?

*Pupil:* The bud begins to swell in early spring when the sap rises.

*Teacher:* Describe the bloom.

*Pupil:* The bloom is white at the top and a little green at the bottom.

The fertilization takes place by transference of pollen by bees. There are always several blossoms in a cluster.

*Teacher:* Describe the plum.

*Pupil:* The plum is ordinarily about so (showing) large. It is covered with a thick skin. Some plums are blue and others are green. In the center is a stone.

*Teacher:* What are the uses of the plum?

*Pupil:* Plums are used to eat and to make marmalade, and jelly, too.

*Teacher:* What else?

*Pupil:* They are used for preserves.

(In the advance work the bat was taken up. The teacher had a prepared specimen, one half showing the skeletal development, the other showing the natural external features of the bat.)

*Teacher:* What animal is that?

*Pupil:* That is a bat (*Fledermaus*).

*Teacher:* What other things can fly?

*Pupil:* Birds can fly.

*Teacher:* Is the bat a bird?

*Pupil:* The bat is not a bird but an animal.

*Teacher:* The bat is a mammal. The bat can fly. The bat is a flying mammal. Repeat that.

*Pupil:* The bat can fly. The bat is a flying mammal.

*Pupil:* The bat is a flying mammal.

*Teacher:* Repeat that several times.

*Pupil:* The bat is a flying mammal.

*Pupil:* The bat is a flying mammal.

*Pupil:* The bat is a flying mammal.

*Pupil:* The bat is a flying mammal.

(This was repeated a dozen times in all.)

*Teacher:* How is the bat fitted out for flying?

*Pupil:* It is light.

*Teacher:* How does that come?

*Pupil:* It is — The body is short.

*Pupil:* The body is not long. The legs are short.

*Pupil:* The bones are thin.

*Teacher:* Repeat that.

*Pupil:* The bat is fitted for flying because its body is not long, its legs are short, and the bones are thin.

*Teacher:* Why is the bird so light?

*Pupil:* The bird is light because the bones are filled with air and the body has air spaces.

*Teacher:* The bat has not these advantages. But it has very large wings. (Boys examined the wings. The teacher measures the length of the wings from tip to tip.) The breadth of the wings is 43 cm. How great is the distance from tip to tip?

*Pupil:* The distance from the tip of one wing to the tip of the other wing is 43 cm.

*Teacher:* Repeat that.

*Pupil:* The distance from the tip of one wing to the tip of the other wing is 43 cm.

(Then followed the description of the bat. The teacher would make one statement and then have it repeated twice at least. When the general description had been finished, three boys gave a summary of all the points.)

*Teacher:* It flies as fast as a bird. It can guide itself in the air skillfully. It cannot fly from the ground because its legs are weak. Repeat that.

*Pupil:* The bat can fly almost as fast as a bird. It can guide itself well in the air . . .

*Teacher:* No, can guide itself skillfully in the air.

*Pupil:* — can guide itself skillfully in the air. It cannot fly from the ground, because its legs are not strong.

*Teacher:* No, because its legs are weak.

*Pupil:* — because its legs are weak.

ZOOLOGY. SIXTH GRADE. HILDESHEIM. 45 BOYS

*Teacher:* What aids the bird in flying?

*Pupil:* The shape of the breast-bone.

*Teacher:* What is the shape of the breast-bone?



*Pupil:* It is shaped like a ship or boat, and therefore the bird can fly through the air more easily.

*Teacher:* What else is the breast-bone for?

*Pupil:* The muscles are attached to the breast-bone.

*Teacher:* What else aids the bird in flying?

*Pupil:* The wings.

*Teacher:* Yes, but I mean other equipment which aids the bird in flying.

*Pupil:* The feathers are strong and stiff and so arranged that they cut through the air easily.

*Teacher:* What else assists the bird in flying?

*Pupil:* The bones are hollow and contain air.

*Teacher:* Are the bones of the horse or cow hollow?

*Pupil:* No, they are filled with marrow.

*Teacher:* How do birds catch their prey? First, how they locate it and then how they seize it.

*Pupils:* The birds locate their prey with their eyes.

*Teacher:* How are the bird's eyes located to aid it in seeing prey easily? Take the owl, for example.

*Pupil:* The eyes are set fast in the owl's head.

*Pupil:* The eyes are large and set so that the owl has a large angle of vision and can see in almost all directions at one time.

*Pupil:* And then the owl's eyes have such large pupils that they can see easily at night.

*Teacher:* What happens to the pupils of the bird's eyes or our eyes at night?

*Pupil:* The pupil of the eye becomes much larger, so that more light rays may enter.

*Teacher:* In what other ways do birds locate their prey?

*Pupil:* Some birds locate their prey by means of feeling.

*Teacher:* The bat, for instance, locates its prey by feeling. It stretches out its wings, and when an insect comes near or in contact with them, the bat turns in that direction, and what is left for the bat to do?

*Pupil:* It has merely to open its mouth.

\* \* \* \* \*

*Teacher:* How are birds fitted out for catching their prey after they have located it?

*Pupil:* The owl has sharp claws and a beak.

*Teacher:* Yes, the owl sees a mouse in the field, and like lightning swoops down upon it and seizes it with its claws. What would happen if the owl could not dart down quickly?

*Pupil:* The mouse would run into its hole.

*Teacher:* What does the owl use its beak for?

*Pupil:* The owl tears the mouse up with its beak.

*Teacher:* Does the owl eat the fur too? (No answer.) Yes, it swallows it, but since fur is hard for the owl to digest, it vomits it out again, after it has rolled all the little pieces together in a ball in its stomach. How is the woodpecker fitted out to catch its prey?

*Pupil:* It has claws and a long beak.

*Teacher:* That is right, but the claws are not used directly for catching the prey. What are the claws for?

*Pupil:* The claws help to hold the woodpecker on the tree.

*Teacher:* What kind of a foot or claw has the woodpecker?

*Pupil:* It has a climbing foot, two toes in front and two which point backward.

*Teacher:* What else does the woodpecker use in climbing?

*Pupil:* The woodpecker uses its tail as a sort of a chair or stool. It is a climbing-tail.

*Teacher:* Now as for the part which the woodpecker uses to catch its prey, what is that?

*Pupil:* The woodpecker catches its prey with its beak.

*Teacher:* What kind of wood does the woodpecker like best to work on?

*Pupil:* Worm-eaten wood.

*Teacher:* Why?

*Pupil:* Because in this kind of wood there are worms which the woodpecker eats.

*Teacher:* First the woodpecker beats on the side of the tree opposite the worm holes. He does this to scare the worms or insects and they run towards the openings. Then he jumps around to the other side of the tree and waits. After a little he stabs his long beak in the hole to catch the worms. He has also a very long tongue.

*Teacher:* (Showing the picture of an ostrich.) The ostriches live in Africa and generally run in herds. They are both wild and domestic. The domestic ostriches are used for hauling and riding. Give me the content of that.

*Pupil:* The ostrich is an African bird. They live in herds. Some are wild and some domestic. They are used for riding sometimes.

*Teacher:* The ostrich is the largest bird. It is about two and one half meters in height, and weighs between fifty and sixty kilograms. It has a large body, a very small head, and little wings.

*Pupil:* The ostrich is a very large bird, about two and a half meters in height, and from fifty to sixty kilograms in weight. Its head is small. Its wings are also small.

*Teacher:* Have you noticed anything strange about the legs of an ostrich? (No answer.) The first joint is peculiarly arranged, it bends backward instead of forward. In this respect it is like the horse. Of what advantage is that? It enables the ostrich to run very rapidly. Can the ostrich fly?

*Pupil:* Not very well, because it is very heavy and its wings are small.

*Teacher:* The ostrich has no breast-bone, which is so necessary for flying, as we have learned in other studies of birds. How would you describe the foot?

*Pupil:* The ostrich has two toes on each foot. It doesn't look as if the ostrich could sit on a limb very well.

*Teacher:* That is right. To-morrow when we have more time we shall study the ostrich further as to what it eats, its young, its nest, and the like.

#### ZOÖLOGY. EIGHTH YEAR. BOYS

*Teacher:* We are going to study about the eagle to-day. What can you tell me about the eagle?

*Pupil:* We have learned in our study of the Alps in our geography period that the eagle likes to hunt the chamois and the mountain goat.

*Pupil:* The eagle is a very large bird. There is an eagle on every gold piece, and on banners and flags there is a flying eagle. Generally on coats of arms there is an eagle.

*Pupil:* I have seen eagles on the buttons of the postman's uniform.

*Pupil:* And also on all imperial documents. In the neighboring village, —, there is the Eagle Apothecary shop, and in — there is the Eagle drug store.

*Pupil:* My mother buys Eagle chocolate.

*Teacher:* It would be best if we could have a real eagle here to-day to examine. But we haven't, so we must travel a long way off.

*Pupil:* We must go to the Alps.

*Teacher:* And we must wait there a long, long time. Why?

*Pupil:* The eagle very seldom permits us to see him, and besides there are not many eagles.

*Teacher:* That's the reason many people in the Alps have never seen an eagle in flight. And we must satisfy ourselves with a picture. Here

it is. Look at it carefully. Take plenty of time. (Children examine the picture.)

*Teacher:* What do you see in the picture. Make the description orderly. (Teacher merely indicated pupils who were to recite.)

*Pupil:* The big, old eagle has a rabbit in his beak. The beak is large and strong.

*Teacher:* There is still more to be said about the beak.

*Pupil:* The upper beak is very thick towards the back, and bent over like a sickle in front, and goes far out over the under part of the beak.

*Pupil:* The eyes are large and yellow. They look very proud.

*Pupil:* The head has sharp pointed feathers. Those on the back of the head are rusty brown.

*Pupil:* The neck is strong and thick. It is covered with rusty-brown feathers like the head.

*Pupil:* The feathers vary in color from brownish yellow to blackish brown.

*Pupil:* The body is rather long and slender.

*Teacher:* What about the wings?

*Pupil:* The wings are long and they almost entirely cover the body.

*Pupil:* The legs are strong and the feet are covered with feathers almost to the toes.

*Pupil:* The talons are long, very strong, sharp, and sickle-shaped like the beak. Each foot has four powerful toes, which are yellow in appearance. Three of them are turned forward and one back.

*Pupil:* Two young eagles are standing near the old one with their mouths wide open. They are rejoicing over the meal their father is preparing for them. They do not look much like the old eagle.

*Pupil:* Their beaks and their talons are bent inward; the wings are short, and soft downy feathers cover their bodies.

*Pupil:* The picture represents an eagle's nest on a steep cliff. The nest is built out of dry branches. We can see high, snow-covered mountains and they are probably the Alps.

*Teacher:* As you said, the eagle on our picture has a rabbit in his beak. How did he get this booty?

*Pupil:* He captured it.

*Teacher:* For what purpose has he fetched a rabbit roast?

*Pupil:* The old eagle and his young were hungry, so he went out foraging.

*Teacher:* Yes, the eagle is always hungry. When he goes out from the nest, he flies spirally high into the air. What do you call that floating about in spiral lines?

*Pupil:* Circles.

*Teacher:* Flying in circles he watches continually. As soon as he notices something close by, he pounces like a flash upon it. But how can the eagle see things creeping or flying down below from such a height?

*Pupil:* He has to have sharp, far-seeing eyes.

*Teacher:* That's it. Nothing escapes his unbelievably sharp eyes. But why does none of his victims escape?

*Pupil:* The eagle pounces upon them with the speed of an arrow.

*Teacher:* But how can he throw himself like lightning from such an enormous height?

*Pupil:* His wings are very large and strong, and are shaped for this purpose.

*Teacher:* An eagle of one meter in height can stretch out its wings two meters, from here to here. So we say that the eagle's span is two meters. Explain *Klafterweite*.

*Pupil:* *Klaftern* means stretch out.

*Teacher:* The animals which the eagle catches must see their enemy in the air before he swoops down.

*Pupil:* He flies so high that he looks very small and cannot be recognized.

*Teacher:* That's right. In this way the rabbit, running all unsuspecting across the field, is surprised and overpowered. Often the eagle looks like a mere dot in the sky. But why does the eagle go up so high?

*Pupil:* In order that he may get a view of a very large amount of ground, for the higher he mounts, just so much the greater is his horizon.

*Teacher:* How can the eagle descend so rapidly from on high?

*Pupil:* He claps his wings close to his body and falls straight downward.

*Teacher:* The eagle, however, must swing just a little out of a straight line, otherwise he would not come down on the right place. At the very last moment he spreads his wings out, otherwise, he would certainly crush himself on the ground. So he catches his booty. That is cruel of the eagle, but animals do not know any better. Let us turn back again to our picture. We have explained how the eagle catches his prey. How may the eagle tear up his booty?

*Pupil:* With his beak, which is crooked and sharp, or with his four sharp, curved talons on his toes.

*Teacher:* Draw his talons on the board quickly. Why are the beak and talons so sharp?

*Pupil:* So they will sink into the flesh easily.

*Teacher:* May not the wings also be helpful in the capture of prey? Think what strength even a goose has in its wings, when a person wants to catch it.

*Pupil:* When it is necessary, the eagle can beat furiously with its wings, for they are strongly built.

*Teacher:* The legs are called clutches. Why, do you suppose?

*Pupil:* They serve for catching things.

*Teacher:* But how is it possible for the old eagle to carry the rabbit such a long distance to his family?

*Pupil:* The beak is bent like a hook. You can see in the picture how the eagle holds his booty secure in his beak.

*Teacher:* What else may have been helpful in carrying during the flight?

*Pupil:* The hook-shaped talons. They are suited like the beak for carrying stuff away, for the prey gets hooked fast on them and cannot escape.

*Teacher:* The talons and the beak are not sufficient. The eagle is fitted out in still another way.

*Pupil:* A thick neck and powerful legs. The legs and neck have strong muscles. The eagle has also a broad breast-bone and a high comb.

*Teacher:* Why is the flying ability of many birds small?

*Pupil:* The domestic chicken and partridge have short, round, stubby wings, and a narrow breast-bone.

*Teacher:* Summarize how the eagle is well fitted for capturing its booty.

*Pupil:* The following items aid the eagle admirably in catching its prey: the sharpness of its eyes, the strength of its neck and leg muscles, the form of the beak and the talons, and the span of its wings.

*Teacher:* Why does the old eagle fetch the rabbit?

*Pupil:* In order to still the hunger of its young.

*Teacher:* I suppose the young eagles get their own food sometimes.

*Pupil:* Never. They still have short wings which are not able to raise their heavy bodies into the air.

*Teacher:* What animals do the young eagles resemble?

*Pupil:* They resemble young chickens, which are called pullets.

*Teacher:* But?

*Pupil:* They are much larger.

*Teacher:* How does the old eagle show himself to be when he gets his young everything that is necessary for their nourishment?

*Pupil:* Kind and considerate.

*Teacher:* Do you know other animals that show great love for their young?

*Pupil:* The fox, the duck, and the hen.

*Teacher:* Are there any animals which do not care for their young?

*Pupil:* To be sure. For example, the cuckoo that lays its eggs in the nest of a strange bird and lets them be hatched out by other birds. It never sees its young.

*Teacher:* Young eagles are insessorial birds. What does that mean?

*Pupil:* They come out of the egg naked and helpless and therefore must remain sitting in the nest a longer time and be fed by the parent birds.

*Teacher:* The old eagles at first feed their young from their crops, then bring them raw meat; and later, crippled animals in order to let them get practice in killing their prey; and finally they let an animal escape in order to practice their young in hunting. How long do the young remain in the nest?

*Pupil:* Until the young have wings long enough to fly out of the nest and get food for themselves.

*Teacher:* What other animals are insessorial?

*Pupil:* The dove, the starling, and the sparrow are birds whose young are raised in the nest.

*Teacher:* The opposite of insessorial?

*Pupil:* Autophagous birds; for example, the chicken, the partridge, quail, and the goose. Their young leave the nest immediately.

*Teacher:* The old eagle teaches his young to fly. The figurative expression, "I have borne you on the wings of an eagle," is derived from the first attempts of an eagle to fly. The following verse of the song, "Praise the Lord who rules over all, who guides you safely on the wings of an eagle." Further, "As an eagle stretches his wing over his young, so hath the arm of the Almighty covered me." But strange to say, the parental love of the eagle does not remain too long. As soon as the young can fly, they must leave the parental home and are never permitted to return. The eagle withdraws his support from his young, and never suffers them again in his vicinity. He compels them to seek their own hunting ground. If the old eagle sees one of his young in his territory again, there is a hard fight, which does not end happily. Why does the eagle act so hard and unlovely?

*Pupil:* He thinks that otherwise he cannot find enough food. Besides he is a glutton and never satisfied.

*Teacher:* What animals does gluttony compel to live alone?

*Pupil:* The mole, cuckoo, and the hamster. They do not allow their own kind in their hunting ground.

*Teacher:* Summarize how the eagle treats its young.

*Pupil:* The eagle brings food to its young and cares for them well until they can fly. Then the young must leave the nest, and are never allowed to return to their parents' hunting ground or home.

*Teacher:* How do you suppose the meals take place?

*Pupil:* The old eagle tears up and divides the rabbit with his beak and claws, which are sharp and crooked for this purpose.

*Teacher:* Can the young participate in the meal already?

*Pupil:* Yes, they have sharp beaks and talons for tearing up meat.

*Teacher:* What part of the rabbit do you suppose the eagles eat?

*Pupil:* The meat, not the fur and bones.

*Teacher:* Why not the fur and bones?

*Pupil:* Because they are hard and indigestible.

*Teacher:* You are wrong. You are thinking about yourself. The eagle has a very excellent digestion, so that he eats the rabbit, fur, bones, and all. Lots of the bones, of course, he cannot swallow at once. The beak possesses no teeth. What must happen to the bones before they can be eaten?

*Pupil:* The eagle must first break up the large bones before eating them.

*Teacher:* Summarize: how the eagle devours his prey, hair, bones and all.

*Pupil:* The eagle tears up his prey with his beak and talons and divides it among his young. The eagle eats not only the flesh but also the fur and bones.

*Teacher:* Does the eagle like rabbit meat only?

*Pupil:* He hunts chamois and mountain goat, too.

*Teacher:* Many naturalists think that the eagle is not able to kill a chamois or a goat in spite of his great strength. I read in a book: "The eagle hunts rather large mammals and birds, especially fawns, does, rabbits, lambs, geese, and chickens. If forced by hunger, he even steals young animals in the very face of the shepherd, and carries them away in the air in his talons." What name does the eagle rightly bear?

*Pupil:* He is a bird of prey that causes a great deal of harm by his gluttony.

*Teacher:* As such he is the terror of the Alps. From where does he get his feathered prey?

*Pupil:* From barnyards, and from the vicinity of dwellings.

*Teacher:* Cannot the eagle become dangerous in other respects?

*Pupil:* Even to human beings.

*Teacher:* And it is said that the eagle has really attacked people who were hunting him or wanted to take his prey from him. Indeed, in our reader it tells us that he has attacked children and hurled adults down



from narrow paths. We shall read the selection next period. But many say that the eagle is not dangerous to men, but that the bearded vulture which lives in the Alps is. I have brought along a picture of this bird. Of this gigantic bird, it says: "He is the terror of lambs and goats, upon which he pounces from on high. He tries to hurl into abysses animals and even men that happen to be on the rocks, and it is a proven fact that at times he has stolen children in mountainous districts." Give briefly what the eagle likes to eat and in what manner he is so destructive.

*Pupil:* The eagle lives upon goats, chamois, sheep, chickens, small animals, like the rabbit and pheasants. The eagle is destructive of flocks and dangerous even to children and grown persons.

*Teacher:* We were just speaking of the damage done by the eagle and the danger he causes. Is there no way to destroy this bird of prey?

*Pupil:* People try to shoot it.

*Teacher:* But it is no easy matter to kill it. Explain why.

*Pupil:* The eagle has a dark brown coat of feathers which is hard to distinguish from the rocks. He lives in protected hidden places. He has sharp eyes and ears. Lastly he is afraid of men and therefore keeps in inaccessible places high in the mountains or flies so high that he cannot be reached.

*Teacher:* The nest of the eagle is high up. But why so high up?

*Pupil:* His retreat is hidden.

*Teacher:* In the picture we can see neither tree, nor man, nor even grass. Reason?

*Pupil:* Nothing can live there. There is no soil, only bare rocks. It is also too cold, for near by there are mountains covered with ice and snow.

*Teacher:* Can you imagine why the eagle is called the "rock eagle"?

*Pupil:* His home is on the barren rocks.

*Teacher:* His regular home is on the mountain heights, but when he gets hungry, he leaves these heights. From here he makes his raids. Why does the eagle have his abode up so high? Does he find his food anywhere near at hand?

*Pupil:* Oh, no. The animals which are necessary for his food live a long way off. He lives here solely for protection and safety, for no other animal that can injure him lives up there. Even the hunter cannot climb near. His young are safe, even when he is out foraging. And then, too, he has a broad view of all his hunting territory.

*Teacher:* Doesn't it get too cold for the eagle up there?

*Pupil:* No, because he has a thick, warm coat of feathers.

*Teacher:* But as soon as the eagle thinks that some one has gotten on his trail, or has found out his nest, he moves out and finds another hiding place. Isn't it a pity to leave such a nest?

*Pupil:* The eagle's home doesn't deserve the name of nest. It is only a few dry branches. It is a pitiful home for the young eagles.

*Teacher:* The eagle's nest has exactly the same name as the chicken hawk's.

*Pupil:* Eyrie (nest).

*Teacher:* What do you suppose it means, the eagle *horstet*?

*Pupil:* The eagle builds an eyrie, he nests.

*Teacher:* *Horst* means *high born*. Explain.

*Pupil:* The eagle's young are born high up.

*Teacher:* Haven't you heard that word *Horst* before?

*Pupil:* Lots of boys have that for a surname.

*Teacher:* The eagle doesn't dwell in our mountains alone, but all over Europe and Asia. (Reading.) "The rock (golden) eagle inhabits the wooded mountain districts of Europe, North America, and Asia. It is found very seldom in Germany. Summarize why and how the eagle builds his nest up so high.

*Pupil:* The eagle builds his nest high up on the mountain in order to protect himself against his enemies. It is built of dry branches and twigs.

*Teacher:* At our school games to-day you shot at an eagle with a sling. Describe your eagle.

*Pupil:* He was made of wood, painted in bright colors, and wore a crown. In one claw he had a scepter and in the other an apple with a cross.

*Teacher:* Did only *your* eagle have a crown?

*Pupil:* No, the other classes had similar eagles, too.

*Teacher:* But why a crown?

*Pupil:* We consider the eagle to be the king of birds.

*Teacher:* Why the king?

*Pupil:* He is the strongest and most powerful of all the birds.

*Teacher:* That's why he bears the name of "king's eagle."

What makes him the king of birds?

*Pupil:* 1. The eagle's size, being one meter high and the wings extending two meters. But the eagle is not the largest bird in the world, for that is the condor, which lives in the Andes in South America and is three meters from tip to tip of wing.

2. His strength, royal power. No animal is able to resist him. His strength comes from powerful bones and muscles.

*Pupil:* 3. The eagle's speed is greatest. No animal can escape him.

4. Majestic flight. Two great pointed wings with beautifully arranged feathers. The tail serves as a rudder and a brake. He has a broad breast-bone.

*Pupil:* 5. He has royal garments. Rich feathering of golden brown. A long tail which appears white at the base, dark bands in the middle, and black at the tip. He has beautiful brown stockings on his legs; and yellow toes.

*Pupil:* 6. Kingly carriage. He carries himself upright like a man. The eagle's walk is said not to be very graceful.

*Teacher:* What is the cause of that?

*Pupil:* His claws are bent too much.

*Teacher:* Is the eagle an air bird or a land bird?

*Pupil:* The eagle is more an air bird.

*Teacher:* What else is kingly about the eagle?

*Pupil:* 7. He has a kingly glance. His eyes are large, fiery, and sharp, flashing majestically.

*Pupil:* 8. He has a royal dwelling place, high on the rocks.

*Teacher:* To what words is the name *Adler* connected?

*Pupil:* With *adelig*, and this word is derived from *edel* (noble).

*Teacher:* What is noble in the eagle?

*Pupil:* His carriage in flying and sitting.

*Teacher:* What people are called noble or nobility?

*Pupil:* Princes, kings, and emperors. The highest persons belong to the rank of nobility.

*Teacher:* Now you can see why the eagle was placed formerly on coins, stamps, and arms.

*Pupil:* The eagle expresses courage, strength, and power.

The eagle is the symbol of princely power and victorious might.

The eagle from olden times has been the symbol of majesty and victory, for example, the eagle of Jove and the golden eagle of the Romans. The old Germans wore an eagle on their helmets as an ornament. Hermann, the liberator of Germany, had an eagle helmet.

*Teacher:* What countries have the eagle on their coat-of-arms?

*Pupil:* Germany, Russia, and Austria.

*Teacher:* Is it fitting for these nations to have this emblem?

*Pupil:* Yes, they are strong and powerful.

*Teacher:* What position does the eagle have on coins, flags, stamps, and arms?

*Pupil:* In full flight, for in this position he looks best.

*Teacher:* Here are coins and stamps. Look at them. Many people receive the "Order of the Eagle." What is that?

*Pupil:* That is the highest order in Prussia. Only men who have performed great service get it.

*Teacher:* Now summarize. Tell what makes the eagle king of all birds and why he is the symbol of power.

*Pupil:* The eagle is king of all birds because of his size, strength, kingly flight, and appearance. For these reasons he is the symbol of power and strength.

*Teacher:* Now summarize all we have learned about the eagle.

*Pupil:* The keenness of sight, the strength of the wings and neck, the shape of the beak and claws, as well as swiftness in flight, fit the eagle for catching its prey.

(Lesson continued on the following day.)

*Teacher:* You have already studied about the birds of prey and other birds related to the eagle.

*Pupil:* We have studied the chicken hawk.

*Teacher:* Look at this stuffed hawk and this picture. How is the hawk fitted out for preying?

*Pupil:* It has a sharp beak for overcoming its booty. The upper beak is bent like a hook and projects over the lower beak. It is suitable for tearing the victim to pieces. The hawk can seize and hold its prey fast with its feet. The toes have long, bent claws. The shape of the wing makes swift flight possible.

*Teacher:* There is something that you can't see either in the picture or from the stuffed model.

*Pupil:* The eyes must be good.

*Teacher:* Still other birds of prey are known to you?

*Pupil:* The house-hawk and the barn-owl.

*Teacher:* Look at these models of the house-hawk and the barn-owl. Prove that the house-hawk (mouse-hawk) is built well for its purpose.

*Pupil:* The house-hawk has large wings which stretch out over one meter and with which it can pounce down quickly upon its prey. Sharp, long toes catch the victim, and the sharp, needle-like claw can sink easily into the flesh. The beak is sharp and bent for tearing food to pieces. The eyes are sharp so it can see a mouse from on high.

*Teacher:* Look at the barn-owl and at the picture.

*Pupil:* The barn-owl has a bent beak, and long, sharp claws, so it, too, is well suited for capturing animals.

*Teacher:* Finally we shall look briefly at the picture of the fifth bird of prey we are to study. Describe it.

*Pupil:* The vulture has short toes with blunt claws, and a powerful beak. The neck is feathered. The feathers of the back are black, those of the neck and breast are reddish yellow. Under the beak there is a beard-like tuft of feathers.

*Teacher:* That's why it is called the bearded vulture.

The result of our discussion is as follows: (writing).

1. Classification: Birds of prey are large, powerful birds, with strong, sharp, hooked beaks; sharp bent claws on the toes; live chiefly on meat.

2. Scientific principle: The bodily structure of birds of prey suited to their manner of life.

*Teacher:* Are the above-named birds of prey entirely injurious?

*Pupil:* No, the house-hawk hunts field mice, rats, hamsters, locusts, and vipers. The barn-owl exterminates many mice and rats. These birds are very useful. On the other hand, the chicken hawk destroys birds, doves, and chickens.

*Teacher:* What purpose does the beak of these birds serve?

*Pupil:* It serves for tearing up, for killing, carrying off, and defense.

*Teacher:* Isn't there anything good to be said of the eagle?

*Pupil:* Majestic flight, appearance, and good care of its young.

*Teacher:* What is meant by eagle eyes?

*Pupil:* Sharp eyes.

*Teacher:* What is meant by eagle glance?

*Pupil:* Sharp glance.

*Teacher:* What is meant by eagle flight?

*Pupil:* Very swift flight.

*Teacher:* By aquiline nose?

*Pupil:* A nose like the beak of an eagle.

*Teacher:* Explain the following expressions.

(New words were defined.)

*Teacher:* Explain *mouse-hawk*.

*Pupil:* It lives chiefly on mice.

*Teacher:* Explain barn-owl (*veil-owl*).

*Pupil:* The feathers form a veil about the beak and eyes.

*Teacher:* A plant in our own forest is named after the eagle.

*Pupil:* The eagle fern. The cross section of its rootstock has the appearance of an eagle.

*Teacher:* Prove that the eagle is constructed so as to aid in its nourishment.

*Pupil:* Its food is chiefly flesh and its beak and claws are formed for catching, hunting, slaying of its prey.

*Teacher:* Show that the eagle is constructed in accordance with the movements it is required to make.

*Pupil:* The wings are long and pointed. The body is comparatively light and thin so it can cut through the air easily. The tail serves as a rudder and a brake.

*Teacher:* How is the eagle protected from its enemies?

*Pupil:* Its dwelling place protects it and its young, as do its color, senses, claws, and strength.

*Teacher:* That's why eagles can live for a hundred years. Now what bird of prey do you know?

*Pupil:* The eagle.

*Teacher:* Next time write a composition about what you admire in the eagle.

And draw an outline of the eagle's head.

(In connection with the lesson in biology, the children read in their readers selections entitled, "The Golden Eagle," "The Election of the King among the Birds," "The Eagle and the Raven" (Æsop), and "The Eagle and the Tortoise" (Æsop)).

## CHAPTER XXI

### PHYSICS AND CHEMISTRY

ONE of the striking differences between the German and the American courses of study in the lower schools is the amount of time devoted to elementary physics and chemistry. These subjects are not ordinarily a part of the course in our country, while they are always taught in the German *Volksschulen* during the last three years, which correspond to our sixth, seventh, and eighth grades. In boys' schools physics and chemistry together receive two hours each week for three years. The time is divided equally between the subjects. The number of hours for these subjects in girls' schools is usually less.

The contents of the courses of study vary greatly in different sections of the country according to the needs and to the facilities for teaching. We give below the course of study Course of Study for the Berlin schools which is general enough to allow wide selection in the choice of particular topics to be taught.

Class 3. Boys' school. 2 hours.

First semester: Heat.

Second semester: Elementary principles of solids, liquids, and gases.

Class 2. 2 hours.

First semester: Topics from inorganic chemistry and mineralogy.

Second semester: Magnetism, electricity, galvanics.

Class 1. 3 hours.

First semester: Conclusion of topics from inorganic chemistry. Organic chemistry.

Second semester: Mechanics, sound, light.

These names appear rather formidable for youngsters of elementary school age, but the topics selected and the method of

treatment are very simple and practical, suited in every way to the understanding of the child. The regular elementary school in Hannover is only seven years in length and the boys have physics and chemistry in the last two years only, while the girls have it only for one year — the sixth grade. The lists of topics in the boys' schools are as follows :

**Topics**      Class 2 (sixth year). Sources of heat; expansion of solids, liquids, and gases by heat; the thermometer; currents in water and air; melting and freezing; steam, vaporization, condensation; atmospheric precipitations; the steam engine; conduction, radiation, and convection of heat; equilibrium, center of gravity; the lever; balances; inclined plane; friction; adhesion; capillarity; expansion of the air; air pressure; barometer; pumps; fire engine; cause of sound; tones; transmittance and speed of sound; the ear; reflection of sound; echo; fundamental magnetic phenomena; magnetic distribution; terrestrial magnetism; compass; electrical phenomena; electrical conductivity; positive and negative electricity; electrophor; Leyden jar; electrical machine; thunder, lightning; lightning rod.

Class 1 (seventh year). (a) Attraction; gravity; weight; pulleys; wheel and axle; block and tackle; falling bodies; pendulum; centrifugal and centripetal force; law of machines; water wheel; turbine; swimming; specific gravity; luminous and non-luminous bodies; transmission of light; reflection of light; plane mirrors; convex and concave mirrors; refraction of light; lenses; colored light; rainbow; the human eye; optical instruments; galvanic elements and series; effects of the galvanic current; electromagnetism; the telegraph; the telephone; induction. (b) The air; oxygen; nitrogen; water; hydrogen; oxidation; carbon; carbon dioxide; carbon monoxide; sulphur; phosphorus; common salt; chlorine; sodium; potassium. (Study of alkali works at Ronnenberg): calcium carbonate; chalk deposits near Hannover; manufacture of glass; silicic acid; glass factories and cement factories near Hannover; coins; precious metals, copper; nickel; iron; gas plant; food elements from the plant kingdom; starch; gluten; bread; alcoholic drinks; vinegar; fermentation; making of sugar; sugar factories in Diesterland near Hannover; food elements from the animal kingdom; albumen; casein; fat; putrefaction; preserving.

Class 2 (sixth year). Girls. The thermometer; atmospheric precipitation; steam engine; the balances; the pendulum clock; water mains; swim-



ming; lamp wick; pumps; barometer; bicycle pump; the ear and sound; the eye and light; telegraph; the telephone; electric street railway.<sup>1</sup>

Of course, the above outline serves only in a general way to show what range and kind of topics are chosen for the course. The topics vary very greatly. In some places the topics selected are very practical and the topics dealt with have to do solely with physical and chemical phenomena of daily life. This is particularly true of the courses for girls! In other places the subject is treated more abstractly and from the viewpoint of formal discipline. As far as our observation went, the topics selected were most practical in character and in application. The lessons were all concerned with the everyday physical and chemical phenomena. They dealt with those things of common life which every intelligent citizen should know, but which he seldom knows. In cities the topics had to do with the physics and chemistry of life in the city, while in the country the topics dealt with the chemistry and physics with relation to agriculture.

As in geography, physics and chemistry are taught for a two-fold purpose — first, to attain practical knowledge of the physical and chemical phenomena of the world round about, and second to attain the formal disciplinary value inherent in the method and content of the subjects. This is at least the ideal which German teachers profess to have in mind. According to the General Regulations of 1872,

the children are to be made acquainted with those phenomena of nature with which they daily come in contact. In the several-class *Volksschule*, the subject matter is to be broadened to such an extent that the most important principles of equilibrium, motion, sound, light, heat, magnetism, electricity are taught in order that the children will be able to explain the more common phenomena of nature and ordinary machines.

Instruction is to start with observation, which is to be aided by experiments, at least in schools with several classes.<sup>2</sup>

<sup>1</sup> *Lehrplan für die Bürgerschulen der . . . Stadt Hannover*, Cruse, 1913, Hannover.

<sup>2</sup> General Regulations of 1872.

The method used in physics and chemistry in the *Volksschule* is always based on observation. If the topic is the electric bell, the teacher always has an electric bell and may also have diagrams or charts of it to aid in explanation. Experiments are used in so far as equipment allows. The teacher as a rule performs all experiments.

The *Realienbuch* is the text. It is very seldom used until the teacher has presented the subject matter and explanation in class. The descriptive and illustrative material in the book are largely a résumé of that which the teacher presents. These texts, however, are very helpful to the children. The explanations are non-technical and extremely simple with sufficient illustrations to make the text clear. In the text-book by Kahn-meyer and Schulze, used in Berlin, out of a total of 552 pages in the science reader, 110 pages are devoted to physics and chemistry. The following is a translation, which is given to show the character of the reading matter in a modern *Realienbuch*:

#### STARCH AND SUGAR<sup>1</sup>

1. *Starch*. — It is found in microscopic form in those cells of plants which serve as food depositories, for example, in the cells of roots and seeds. We obtain starch chiefly from potatoes and wheat. Try to dissolve starch in water. Put some starch in water and heat it. Starch absorbs water on heating and swells up to such an extent that a gummy mass is formed. To a dilute starch solution we add a solution of iodine; it becomes dark blue. Upon boiling the color disappears, but reappears on cooling. Taste sprouted barley. In sprouting of seeds a ferment (diastase) is formed, under the influence of which starch is changed to sugar.

2. *Dextrin*. We warm dry starch up to 170–200 degrees C., constantly stirring. It becomes yellow, then brown. The iodine will no longer bring out the blue color. This substance formed from starch is dextrin. Pour water on the dextrin. The dextrin dissolves and forms a sticky mass, which can be used as a glue instead of gum arabic. Dextrin

<sup>1</sup> Kahn-meyer and Schulze, *Realienbuch*, p. 539, Berlin, 1910.

is also used in dyeing, likewise in ironing. Dextrin is also formed in baking. The heat of the oven acts so upon the outside of the bread that the starch is changed to dextrin. It is this dextrin which holds the particles of starch together in the form of a hard crust which we notice on the top of the bread. If we paint the hot crust with water, the dextrin dissolves; then if we put the bread back in the oven again, the crust becomes very glossy and smooth.

3. *Grape Sugar*. Notice the separation of sugar in raisins and plums, as also particles of sugar, which crystallize out of honey. Compare its taste to that of cane sugar. Where does grape sugar appear? We make it out of cane sugar or out of starch. Compare its taste and solubility with that of cane sugar. A grape sugar solution is reddened by a Fehling solution. Since starch sugar is a substitute for honey, it is used for that in sweetening honey and spice cakes. It is used a great deal in making candy. Starch sugar is used a great deal for coloring food products. For this purpose sugar colors are made out of it. How is it to be explained that frozen potatoes taste sweet?

It is customary in all of the larger cities such as Berlin and Stettin to have a science reader prepared to meet the needs of the community and the course of study. Thus the book just quoted from was written to satisfy the demands of the Berlin course of study. We shall give a list of the topics dealing with heat which are taken up in the above quoted text-book. Each large subject in physics and chemistry is handled in much the same way. The reading matter is as a rule about as technical as the paragraphs dealing with sugar.

Topics  
Treated in  
Text

## I. Heat.

### A. Effects of Heat.

#### 1. Expansion of bodies by heat.

- (a) Expansion of solid bodies.
- (b) Expansion of liquids.
- (c) Expansion of gases.
- (d) Thermometer.

Mercurial thermometer.

Alcohol thermometer.

- (e) Irregular expansion of water.

## 2. Changes of Form produced by Heat.

- (a) Melting and freezing.
- (b) Heat of fusion.
- (c) Heat of solution.
- (d) Boiling-point.
- (e) Steam, its expansion.
- (f) Condensation of steam.

## B. Transmission of Heat.

- 1. Conduction — good and bad conductors; application of heat conductors.
- 2. Heat radiation; character, direction, and effects of heat rays; influence of the surface upon radiation.

## C. Sources of Heat.

- 1. The sun.
- 2. Chemical processes.
- 3. Mechanical work.
- 4. Electricity.

## D. Heat Phenomena in the Atmosphere.

- 1. Vaporization.
- 2. Humidity.
- 3. Atmospheric precipitations.
  - (a) Dew and frost.
  - (b) Fog and clouds.
- 4. Currents of air.
  - (a) Origin.
  - (b) Land and sea winds.
  - (c) Trade winds.

Many may oppose chemistry and physics in the elementary school. The Germans hold that in order to be an efficient German citizen each child must acquire an elementary knowledge of ordinary things. The child on leaving school should know about the telephone, the telegraph, simple machines, the chemistry of butter, meat, sanitation, and the like. The outline of a course in chemistry as given in a German school is given to show the practical nature of the work :

**Practical  
Nature of  
the Course  
in Chemis-  
try**

- 1. The air; oxygen; nitrogen; burning; oxidation; ores that are oxides.
- 2. Water; drinking water; distilled water; characteristics of water.

3. Fire; the flame; carbon; diamond; graphite; oxides of carbon; soda water; chemistry of respiration.

4. Heating and lighting. Substances; wood; peat; soft coal; anthracite coal; petroleum; illuminating gas; ammonia; paraffin; carbolic acid and other by-products in the manufacture of gas; carbon monoxide; lighting devices and lamps.

5. Matches; sulphur; sulphur dioxide; hydrogen disulphide; phosphorus; gun-powder.

6. Common salt; sodium; soda; chlorine; hydrochloric acid, potassium and potash salts.

7. Calcium; lime; brick; gypsum.

8. Glassware and pottery; silicic acid; silicates; making of glass; manufacture of pottery; glazing; feldspar; aluminium.

9. Coins; gold; silver; copper; nickel; tin; zinc.

10. Iron; mining and milling of iron; iron industry in Berlin; iron compounds.

11. Soils; composition of the soil; manures.

12. Sugar and starch; grape sugar; beet sugar; cane sugar; milk sugar; malt sugar; starch; dextrin; sugar and starch as foods.

13. Beer, wine, and vinegar; manufacture; alcohol and its abuse.

14. Meal and bread; planting of grain; grinding of the meal; baking of bread.

15. Milk, butter, and cheese; composition of milk; changes in milk; preservation of milk; nutritive value of milk; making of butter; artificial butter; making of cheese.

16. Fats, soaps, and glycerin; characteristics of fats; manufacture of soaps; action of soap; making of stearin candles, glycerin; nitroglycerin; nutritive value of fats.

17. Eggs and meat.

18. Vegetables, fruits, and mushrooms.

19. Coffee, tea, cocoa, and tobacco.

20. Paper and ink; their manufacture.

21. Leathers and tannery.

22. Dyes and dyeing.

All of these topics are taken up in the very simplest manner possible. We were struck by the simplicity of the explanations and the practical nature of the illustrations used by the teacher.

As in other subjects the teacher usually was the source of most of the material and the statements made concerning whatever topic there was under discussion. Very rarely did the teacher ever begin by getting the children to tell what their experience had been or their knowledge of anything was. For example, a teacher was beginning the study of the balances. He had a certain type of balances in his hand. His first statements were, — "This is a pair of balances. What is this?" This is a very common practice among teachers of elementary science. They do not give the children any chance at all to express what they have seen. There were some exceptions to this method of procedure. Ordinarily the children repeat what they are told to say and see only that which they are told to see. Let it be said, however, that the teacher always touches the essential points, so when through the child does know something about what he has studied.

Practically all teachers used some form of experimentation. Particularly the rural teachers were very resourceful in getting experimental material and supplies at a very little cost, either of time or of money. The experimentation in almost all schools is carried out by the teacher; the children merely look on and see what happens. One very excellent feature of this phase of the work was the preparation teachers had always made previous to the beginning of the lesson. Whether the experiment was in a laboratory or in an ordinary classroom there was never a failure in a lesson that I saw. The material was always on hand, and the whole list of experiments went off like clockwork. Every lesson made its point, and made it clearly and definitely.

Only the newer and more modern schools have laboratories for science instruction. Ordinarily the experiment is carried on in a regular classroom; the teacher does the best he can to make conditions favorable. The materials are always kept in

the general storeroom and are brought to the classroom by the teacher or by the pupils. This is about all the activity the children get in this work, except when they assist a little in the actual performance of the experiment. In the newer schools one finds a large room or a small amphitheater devoted exclusively to science work. In this room are the chemical and physical apparatus and supplies; a lecture and demonstration table; water, light, electricity, and gas connections; and often a stereopticon. This is a vast improvement over the old system of carrying out the experiments in the regular classrooms and it may be the ideal way for elementary science work. Laboratories

Under the influence of the movement now afoot in Germany which calls for more self-activity on the part of the pupil, a few schools have put in laboratories with individual cabinets and desks, where, under the teacher's guidance, each pupil carries out his own experiments. This plan was used in the *Arbeitsschule* at Dortmund, but it is rarely found in Germany. However, it is permissible for a teacher to get up volunteer classes to do such work after school. Laboratory Work.

Physical and chemical apparatus is much cheaper in Germany than in America; it is also much better. Though it may be cheap, many German teachers with their pupils have become collectors of apparatus and inventors of substitutes. Ink bottles are made over into alcohol lamps; tin can lids are made into scales; darning needles are used as axles; fruit cans are used as battery jars; cigar boxes for wooden apparatus, and so on. Whether the apparatus is made at home or bought, there is always enough to give the course in a very satisfactory way. The cost of apparatus is perhaps the strongest argument against individual desks in the laboratory and experimentation by the pupils. It would cost enormous sums to fit up laboratories for ten million children. Apparatus

Some teachers hold that a child should experiment to find out the laws of nature. The majority of German teachers hold to the opinion that experiments by the pupil can only serve to substantiate observations he himself has made and to better fix such observations in the child's mind because he has worked with the thing, has seen it, felt it, and not merely heard of it.

Chemistry and physics are among the newer subjects in the elementary curriculum in Germany. The teachers say that they consider these two subjects of very great importance and that their presence in the course is justifiable. Germany of to-day is intensely commercial, industrial, and materialistic, even more so than America. Physical and chemical knowledge enters into almost every phase of a German's daily life. In the country the farmer has a great need for chemical knowledge, for it is only by the application of chemistry to the soil that Germany has been able to produce such enormous quantities of foodstuffs and to support her very large population. In the city there are even more demands for some use of physical and chemical laws in many occupations and callings. Naturally all of this knowledge is not obtained in the *Volks-schulen*, but what the common day laborer needs to know is acquired in the period of school life before apprenticeship. Some of the methods employed in teaching these subjects are not ideal by any means, but the fundamental principle that it is necessary that the child know his environment is absolutely sound.

CHEMISTRY. STEGLITZ. SCHOOL NO. 5. 45 BOYS. EIGHTH GRADE

*Teacher:* I have here in a bottle some sulphur and here I have some iron filings. I am going to mix them. What am I doing?

*Pupil:* You are mixing sulphur and iron filings.

*Teacher:* How does the mixture look?

*Pupil:* The mixture looks gray and yellow.



*Teacher:* Here I have a magnet. What are the properties of a magnet?

*Pupil:* A magnet will attract iron.

*Teacher:* (Performs the experiment — separating the sulphur and the iron by stirring the magnet around in the mixture and withdrawing the iron which clings to the magnet.) What is the result?

*Pupil:* The iron has been removed from the mixture by means of a magnet.

*Teacher:* When I mix sulphur and iron filings I get a mixture; with the help of a magnet I can extract the iron. Repeat that.

*Pupil:* I put iron filings and sulphur together and I get a mixture. I can at any time separate them by holding a magnet in the mixture. The filings cling to the magnet and thus the mixture is broken up.

*Teacher:* Very good. Now I take a test tube. What is it?

*Pupil:* It is a test tube.

*Teacher:* In the test tube I put some of the mixture of iron and sulphur and I heat it. What am I doing?

*Pupil:* You are heating it.

*Teacher:* I am heating the mass. Fumes arise. What happens when the mixture is heated?

*Pupil:* Fumes arise from the mixture when it is heated.

*Teacher:* The mixture when heated forms a hard mass. (Breaks the test tube and shows the product to the class.) How does it smell?

*Pupil:* It smells very badly.

*Teacher:* The iron has united with the sulphur, forming iron sulfide. The heat brought about the chemical combination and caused the compound to be formed. What is this compound?

*Pupil:* The compound is iron sulfide.

*Teacher:* How was it made?

*Pupil:* A mixture of iron filings and sulphur was heated in a test tube. The heat caused the formation of a chemical compound, iron sulfide.

*Teacher:* How do I get this chemical compound?

*Pupil:* You get iron sulfide by heating a mixture of iron and sulphur.

*Teacher:* I can't separate iron and sulphur in this compound by means of a magnet. Show the difference between a mixture and a compound.

*Pupil:* A chemical mixture can very easily be broken up, while a compound is more difficult.

*Teacher:* A compound consists of several substances united in such a way as to change the nature of the substances involved. If there is only one thing in a substance, it is called an element. A mixture does not change the nature of the substances put together. Repeat that.

*Pupil:* A compound consists of several substances combined. There is a change in the nature of each substance. A mixture does not affect the substances used.

*Teacher:* I can break up the iron sulfide by the addition of some hydrochloric acid. (He performed this experiment, forming two new compounds, iron chloride and hydrogen sulfide.) Almost all compounds can be broken into their elements, but it is not very easy, not nearly so easy as it is to break up mixtures. When we look about us we see two large classes of substances, elements and compounds. In all there are 87 elements. Here are some. This is potassium, this is iron; sodium, phosphorus. What are these substances?

*Pupil:* They are elements.

*Teacher:* These elements are related to each other. When they unite they form compounds. Chalk is such a compound — it is calcium carbonate — made up of calcium, carbon, and oxygen. What is this? Is it an element or a compound?

*Pupil:* That is a piece of chalk. It is a compound. It contains carbon, oxygen, and . . .

*Pupil:* Calcium.

*Teacher:* This is sulphuric acid. What is this?

*Pupil:* That is sulphuric acid.

*Teacher:* I am going to add some diluted sulphuric acid to some chalk. The acid destroys the compound, calcium carbonate or chalk, and new compounds are formed. (Performs the experiment.) That gas you see going off is carbon dioxide and gypsum remains in the test tube. What have we learned so far about a mixture?

*Pupil:* A mixture was made by putting sulphur and iron filings together and then we separated the two by means of a magnet, the iron filings clinging to the magnet. The substances were not changed.

*Teacher:* What is a compound? What did I use to make one?

*Pupil:* A mixture of iron filings and sulphur was heated and a new compound, iron sulfide, was formed. Substances used in making a compound are changed and are not easily separated.

*Teacher:* What do compounds consist of?

*Pupil:* Compounds are made up of elements in chemical combination.

*Teacher:* What happened to the chalk?

*Pupil:* By adding sulphuric acid to the chalk, the chalk was broken up. Carbon dioxide passed off as gas, and gypsum was formed.

*Pupil:* Gypsum is used in making casts and statuettes.

*Teacher:* Why must one work rapidly with this substance?

*Pupil:* It becomes hard very quickly.

*Teacher:* We call the change in chalk which we have just seen a chemical process. In a chemical process old compounds are changed and new ones were formed. What were the old compounds and the new ones in the chemical process which we have just seen?

*Pupil:* The old compounds were chalk and sulphuric acid. The new compounds were gypsum and carbon dioxide.

*Teacher:* (He took some clean zinc and a beaker filled with water.) I put some zinc in some water. When zinc is put in contact with oxygen there is a new compound formed — zinc oxide. When any metal is combined with oxygen an oxide is formed. What is formed?

*Pupil:* When a metal combines with oxygen an oxide is formed.

*Teacher:* You notice that the zinc is already covered over by this oxide. There are metals and non-metals. Metals generally have a silver-like appearance when freshly cut, but this surface becomes dulled when exposed to the air or to oxygen. If I now add some acid (HCl) to the beaker containing the water and zinc, bubbles begin to rise. These bubbles are hydrogen gas, and there is a new substance, zinc chloride, formed. What did we do?

*Pupil:* We put some zinc in water and let it stand a while. Then some hydrochloric acid was added. New compounds were formed. Hydrogen gas was given off and zinc chloride was formed.

*Teacher:* We shall write a composition about the work this morning some day next week. Now what did we do in this last experiment?

*Pupil:* We put some zinc in water. Then we added some hydrochloric acid.

*Teacher:* What did we see?

*Pupil:* First the zinc was covered by a grayish substance, zinc oxide. Then after the acid was added, bubbles of hydrogen gas arose. A new substance, zinc chloride, was formed. The beaker got warm.

*Teacher:* Yes, that is an important point. In every chemical process, heat is evolved. What is a mixture? What is a compound? We shall answer those questions in our next composition.

## CHAPTER XXII

### SEWING

SEWING is a required subject in all girls' schools in Germany. In fact it is one of the very oldest subjects of instruction in girls' schools, having been introduced into the curriculum when the only other branches taught were reading, writing, and singing. It was made obligatory in the Prussian public *Volksschulen* for girls in 1872, although it had been taught in a more or less systematic way in the schools of all German states for centuries.

The purpose of sewing in the *Volksschulen* is first of all to teach the girls how to prepare those articles of clothing and of general household use which are absolutely indispensable to every family. In the second place a very great deal of attention is given to darning, patching, mending, and repairing of clothes and household goods. On the pedagogical side sewing is supposed to arouse the spirit of independent work in the children as well as to encourage economy, orderliness, the sense of color and form, and enjoyment of constructive work. The reader may judge how much the pedagogical phases of the subject are really considered.

In sewing more than in some other subjects the course of study differs greatly according to the size of the school and the number of classes. The course must be limited in country schools or in many small town schools on account of the lack of time and teaching force. The following is about what one would find in an ordinary country school.

Third school year: Knitting, a pair of children's stockings.

Fourth and fifth years: Pair of ladies' hose; making of heels; darning of heels.

Sixth year: Sewing bag, handkerchiefs and towels are hemmed; and sewing simple aprons.

Seventh year: Underwear for women; canvas for marking.

Eighth year: Man's shirt. Patching, mending, and darning of old articles of clothing.<sup>1</sup>

The course of study for the Berlin schools is given next. It covers six years, beginning with the third grade.

Class 6. Two hours. Introduction to sewing. The first sewing exercises are to be on pieces of stiff canvas about 20 cm. square, with needles and red embroidery cotton, No. 8. These exercises include the running-stitch, quilting-stitch, back-stitch, and the cross-stitch. The cross-stitch is first to be practiced as an under-stitch lying from left to right, then as a top-stitch, lying from right to left, and finally as the finished cross-stitch in horizontal and perpendicular lines in simple patterns or in some Latin letters. Beginning knitting. Class work: a knitting bag of about sixty stitches is to be done with strong cotton, No. 7 or No. 8 needle. Practice of right and left stitches, and joining them together. About thirty hours are to be given to this work.

Class 5. Two hours. The knitting is to be continued on a pair of stockings of about sixty-four stitches. Material: strong, imitation Vigogne. Size of needle, No. 7 or 8.

Class 4. Two hours. Sewing on a practice piece of cloth about thirty cm. square, of linen or half linen. Running stitch; back-stitch, two simple seams, bound together by a whip seam; three or four flat turned seams, fastening of borders by broad quilting seams on the upper and lower sides and by edging on the right and left side; buttonholes; sewing on buttons and hooks and eyes. Also two letters and the date in cross-stitch. Knitting exercise in making heels and a cap.

Class 3. Three hours. A prize shirt is made from 1.5 m. of linen or shirting. . . . Drawing the pattern and cutting the pattern in paper precede the cutting out in cloth. The finished shirt is to be marked with letters done in cross-stitch. Knitting, stocking heels and caps.

Class 2. Four hours. Repairing; patching and darning, three hours for patching and one hour for darning. Patching includes inserted patches and patches which are merely laid over the hole. Patches are done first

in white and figured wash goods, and then in plain and figured woolens. Darning takes up first darning of knitted socks. Then the work is extended by learning to attach parts of stockings by means of the knitting stitch, and the knitting in of heels when the foot is entirely separated. Next comes the darning of holes and tears, first on practice pieces and then different materials. It is desirable that the darning be done on the patching previously executed.

White and figured wash goods, and also plain and figured woolens are used for the patching; and for darning, sock yarn, and darning yarn. Besides these, the use of other common materials will be allowed for patching and darning.

Class 1. Four hours. Making a shirt waist. First the drawing and cutting of the pattern in paper, then in the material, finally the sewing of the waist. A piece of wash goods, 80 cm. by 1.7 m. is to be used.

*Embroidery.* — Learning the alphabet in diagonal broad-stitch; scalloping. Material: a small piece of embroidery cloth, only with letters and simple scallops. Two weeks are devoted to embroidery.

Under all circumstances it is distinctly kept in mind that sewing, embroidery, and darning, in brief, the technique of these activities, is not the main purpose of the work, but that the children shall learn independently to make useful articles and in so doing acquire the technique of sewing.

The number of hours given over to sewing varies somewhat. From the third school year on, never less than two hours are given weekly, and the number of hours may be, and frequently is, as high as four. Sewing is begun in the second school year sometimes, but the practice is not general.

The size of classes varies greatly. The ordinary class is between forty-five and fifty-five. This number is plainly too large for one teacher to handle at one time. In order to meet this situation, the classes are usually divided or there are two teachers assigned to each class. In actual practice then one teacher ordinarily has to look after from twenty-two to twenty-seven children. This number is frequently much smaller.

There are two classes of teachers who give instruction in sewing, those who are regular teachers of sewing and who do nothing else, and those who teach sewing in addition to or as a part of other regular classroom teaching. The **Teachers** latter class is by far the more numerous. There are special normal schools for the training of teachers of sewing and cooking, and there are also courses offered in normal schools which prepare teachers for these branches in the *Volksschulen*. Girls who have finished a girls' higher school or a middle school may be admitted to the courses to prepare for teaching cooking and sewing. Regular teachers in girls' schools will also be admitted to such courses. The curriculum which these future teachers of domestic arts pursue includes <sup>1</sup> practical work in sewing, in which they must make all the articles which are required in the courses of study for girls' schools: machine sewing, cutting and fitting; a course in textiles; drawing, free-hand and mechanical; pedagogy, including history of education, principles of education, psychology, and methods, special methods in teaching sewing with practice teaching; physiology and the hygiene of sewing; German and civil government, arithmetic, singing, and gymnasium. Taking such a course does not excuse one from an examination, which is required of all who wish to teach cooking and sewing. This examination, which consists of practical and written tests, covers the work given in the outline above.

Class instruction is used almost entirely in sewing. There is very little individual instruction, and in fact, it is not desired by the teachers, unless in exceptional cases. There are not **Class In-** special sewing rooms as a rule, the regular classroom **struction** being used for the purpose. In some of the larger and newer schools where sewing machines are installed, there are special rooms for all manual activities. The greater part of the work

<sup>1</sup> *Zentralblatt*, 1907, pp. 778-780.

in sewing is done by hand, for in actual life the German home which sends its children to the *Volksschule* seldom owns a machine, and hence it would be useless for the girls to learn to use machines in school.

One would think that sewing would give the children an opportunity for a little initiative and expression of individuality, but such is not the case frequently. The typical **Method of Instruction** method of instruction is as follows: First of all, the teacher shows the children the aim of the lesson by showing them the finished article which the class is going to make. The beginning is made from the whole garment or article, and it is analyzed into its component parts. What the children have already learned is used in acquiring the mastery of the new steps which the new problem sets for them. The teacher shows how the work is to be begun and the compound activities are dissected into their simplest operations. The teacher shows the children what she wants done by doing it before them first. Then she questions them as to what they have seen and requires them to give reasons for doing the work one way rather than another. Frequently the teacher illustrates what she wants done by means of drawings or diagrams on the board. After the teacher has finished, some of the girls are required to give an explanation of the whole operation. They make drawings, too, if they are able to do so.

Then comes the actual work, and its doubtful value will be immediately apparent. Practically all new manual movements or activities, such as learning a new stitch, are taught as drills, the teacher first calling the new movements, "In, out, around, in, out, around," and later by counting or tapping on the desk. This is kept up until all the children have learned the process. This type of work is continued throughout the entire six years of sewing, but not to the same extent in the upper grades as in the lower. To use the words of a German teacher, "In this way



equal progress for all is made possible." Whatever may be said for or against rhythmic manual activities, the whole method is typically German. It makes all of the children learn the process, it enables them all to do the work reasonably well, it makes them all get through about the same time, it saves the teacher, and it *makes the children all alike*, which is very desirable in the German scheme of things. After any activity has been sufficiently well learned as a group, the children are allowed to go ahead of their own accord. Naturally, in spite of the methods employed, some children can work faster than others. Whenever a girl finishes the class assignment and has some time left, she is given extra work and is sometimes allowed to choose some particular project for herself, with the teacher's approval. At Christmas the children are allowed to work on gifts for their families or for the poor.

Correction of work is carried out as a class rather than individually, for similar errors are generally made by several in the class. At a given time the teacher calls on the class Correction  
of Work for suggestions as to the method of correcting the mistakes. First, a child will give the correct way in which the work should be done, and then this way is compared with the incorrect way and the errors are pointed out. If at last one or two children have not succeeded in doing the work correctly, the teacher will give them some individual attention.

Discipline in sewing rooms is always a rather difficult question. As a rule the children are permitted to talk to their neighbors, but are never allowed to leave their seats Discipline without permission. Some teachers told us that the rhythmic method in teaching was a very great help in the matter of discipline. It takes no explanation to see how that would be so. When a child needs help from the teacher, she merely lays her work on her desk, folds her hands, and waits until it is her turn to go to the teacher's desk. When the time comes for

the approval of the children's work, the teacher passes from desk to desk and inspects the character of the finished product. This is done to save time and confusion.

The discipline in the sewing classes that we observed was by far the poorest of all that we saw in the German schools. Principals of schools attributed this to the youth of some of the teachers, to the character of the work, and to the fact that many of the sewing teachers are special teachers or substitutes. One principal said to me, "Oh, you can't expect much in a disciplinary way from women."

The children always buy their own materials, such as needles, thread, and cloth. If a child is too poor to buy her own materials, they are supplied her by the community. This situation arises rarely. The parents never make objection to the purchase of sewing materials because the things the girls make are always useful articles and no loss whatever is involved. As can be noted from the course of study given above, the amount of material and the number of articles made are very conservative.

In some schools one finds quite a lot of illustrative teaching material in the way of darning, patching, knitting, and weaving charts, and model sets of the articles commonly made in the *Volksschule*. The use of the charts seems to be quite general and with rather good results. A darning chart is generally mounted on a standard so that it can be seen from all parts of the room. The material is heavy white woolen yarn and a hole has been left in the goods. The darning cotton or wool is black so that the children can see how the stitches are taken. The other charts are made somewhat on the same plan. Sewing machines are not very common and are used only in the last grade of the school. The Singer and Dürckopp machines are the makes in commonest use.

There are two outstanding features of sewing instruction

which deserve attention. The first thing which recommends itself is the extreme practical nature of the work done by the girls in their sewing courses. Knitting, darning, patching, making of stockings, shirts, shirtwaists, aprons, and the like form the substance of the course. In our own country too much of the time in sewing is given over to making fancy work and such articles, so that the majority of parents put the whole affair down as a fad and never consider it as a serious subject worthy of time and thought. As a matter of fact, children take more actual delight in making something that can be used by them than they do in making miniature garments and make-believe clothes. It may seem strange to Americans why so much knitting and darning is put in the course in German *Volksschulen*. That is accounted for by the fact that three fourths of the population of the country wear knitted woolen stockings in the winter time. Darning and mending are integral parts of the great German virtue — economy. Every German *Hausfrau* takes her needlework with her on every occasion, so that no precious moments go to waste.

The other point that comes to our attention is the drill or rhythmic method employed in teaching sewing. All the children are kept together. "One," — the needle goes in; "two," — the needle goes through; "three," — the needle is out. *Regular progress* is the watchword. Every child shall do everything in the same way. It raises a pedagogical question which we cannot decide. This much we know, it is one of the processes in which we can most clearly see how all Germans are made to think and act alike. We cannot condemn the method because it does what is most desirable from the German viewpoint.

## CHAPTER XXIII

### COOKING

COOKING is by no means general in the German *Volksschulen*. It is taught in practically none of the rural schools and in very few of the schools in the smaller towns or cities. **Prevalence in Schools** Cooking has been reserved, until very recently, for the mother to teach at home. Of late years in the large cities where the mothers were not able to teach cooking for economic reasons it has become customary to establish school kitchens, each of which could serve several schools. In<sup>1</sup> all Prussia there are (1913) 38,684 schools, and of this number 1779 have special equipment for teaching cooking and general housework. Of the 33,559 schools in the country only 404 are provided with instruction in cooking, while of the 5125 city schools 1375 are equipped for cooking. Seven hundred seventy-five of the city schools equipped for cooking are found in the 1747 schools of Prussia's thirty-three largest cities. It can readily be seen that there is still room for wide development along this line.

We give below the complete course of study in cooking for a city of four hundred thousand population. It includes both technical and practical work. **Course of Study**

Let it be remembered that this course is for girls from homes whose incomes seldom exceed five or six hundred dollars a year. **Significance** The above course may not include many dishes which sound very appetizing, especially in some of their combinations, but they are the things the common people live on. American household economists can do well if they

<sup>1</sup> *Schulstatistische Blätter*, January, 1913.

learn this one lesson in making courses of study: to teach the girls to prepare the dishes which they will sometime need to know how to prepare. One observes very few fancy dishes in this course of study; one sees no charlotte russe, one sees no lady fingers, one finds no macaroons.

No.	THEORY	PRACTICE	SPECIAL WORK
1.	Introduction.	Milk soup.	
2.	The stove and fire-making.	Potato soup and meat balls.	
3.	Food elements.	Chopped meat with herring sauce and potatoes.	
4.	Meat.	Roast pork and boiled potatoes.	Scouring wooden-ware.
5.	Eggs.	Pancakes and rhubarb.	Packing of eggs.
6.	Milk.	Creamed potatoes and liver.	
7.	Laundry I. Soaking, washing, drying.	Meat soup.	Washing the tea towels.
8.	Laundry II. Laying, rolling, ironing.	Rice with raisins.	Kitchen laundry.
9.	Fruit.	Fruit soup with bran dumpling.	
10.	Review: Egg.	Spinach, boiled eggs, boiled potatoes.	Cleaning brooms.
11.	Vegetables I.	Turnips and potatoes with pork.	
12.	Potatoes.	Potatoes, parsley, and sausage.	Scouring of pans and kettles.
13.	Beverages.	Oat-cocoa.	Cleaning of spice-boxes.
14.	Preserving fruit.	Pudding and fruit.	Preserving pickles.
15.	Vegetables II.	Cabbage with mutton and potatoes.	Preserving of beans.
16.	Milk. Review.	Bran gruel and fruit sauce.	Cleaning of pantry.
17.	Grains I.	Corn-meal cakes and apple sauce.	
18.	Grains II.	Hulled barley and plums.	Cleaning of cellar.
19.	Review: Laundry.	Green beans with bacon and onions and potatoes.	Kitchen laundry.
20.	Review: Meat.	Goulash and mashed potatoes.	

No.	THEORY	PRACTICE	SPECIAL WORK
21.	The oven.	Apple and rice pudding.	Ironing.
22.	Leguminous plants.	Lentil soup and sausage.	Cleaning of granite-ware.
23.	Brewing.	Meat soup.	Preserving of fruit.
24.	Fish.	Smothered perch, mustard sauce, potatoes.	
25.	Bread-baking.	Bread, bread soup.	Scouring pans.
26.	Food for invalids.	Oatmeal, Irish stew.	Cleaning of brooms and brushes.
27.	Butter and cheese.	Peas-porridge soup with bread-crumbs.	
28.	Review: Potatoes.	Baked potatoes, fruit.	Scouring of the floor.
29.	Beets, radishes, turnips.	Fricassee fish, potato salad.	
30.	Baking.	Christmas cakes, malt, coffee.	
31.	Water.	Bran soup, sour potatoes, smothered veal.	
32.	Clothing and Cleansing.	Potatoes with herring.	Scouring of tables.
33.	Review: Vegetables.	French turnips with beef and potatoes.	Cleaning the stove.
34.	The calf; inner parts.	Lung soup and boiled potatoes.	Scouring and scrubbing the kitchen.
35.	Sugar.	Bread dumplings and baked fruit.	
36.	Review: Fish.	Baked herring and potato soup.	
37.	The fats.	Beefsteak and potato salad.	Cleaning of cupboards.
38.	Review: Fruit.	Potato balls, fruit.	
39.	Bookkeeping.	Fish cutlets, rice soup.	Cleaning of cellar.
40.	Cleaning of kitchen.	Roast pork, macaroni.	Thorough cleaning of kitchen.

The first glance at the course shows several things. First of all, cleanliness stands forth prominently as a feature of the work. Scour, clean, scrub are the watchwords. Second in prominence, the word *potato*, Germany's chief means of sustenance as far as the lower classes are concerned. The potato culture was introduced into Germany by Frederick the Great at the same time that he introduced the sugar beet. This one deed alone

was sufficient to make him a great ruler. One often stops to wonder what the German masses would eat if they did not have potatoes. As a matter of fact, the cooking of potatoes and vegetables of all sorts is given much more attention in the *Volksschulen* than the cooking of meats because the poorer classes have meat rather rarely.

In some schools the course in cooking is two years, while in others it is only one year. Ordinarily three hours a week are devoted to it, but in quite a number of places only two hours a week are used. However, the hours are <sup>Length of Course</sup> always run together so that the girls will have a period of sufficient length in which to do acceptable work. The afternoon is frequently chosen as the time, since it in no way interferes with the regular school program.

The normal number in a class in cooking is twenty-four. Sometimes the number is smaller than this, but we <sup>Size of Classes</sup> have never seen a larger class. This number is usually about the number of girls that one would find in a regular eighth grade.

The kitchens are always large and fully, though not expensively, equipped. There are generally six stoves, three gas stoves and three coal stoves, in each kitchen. Coal is used very <sup>Equipment of Kitchens</sup> extensively in Germany for cooking. Each stove ordinarily has four burners or lids. There are six flat-topped tables, one for each group of girls, since the class is divided into six groups of four. There are four stools at each table. This equipment occupies the middle of the room. The teacher's desk is at one end of the room, while the sinks and wash basins are at the other, as are also the general stores and supplies. Against the wall on the sides of the room near the stoves are cabinets, one for each group of girls.

The equipment in each cabinet was as follows: 1 salt box, 1 meal box, 2 large graters, 1 lemon squeezer, 2 small graters,

1 salt shaker, 1 pepper shaker, 1 large bread board, 1 small bread board, 1 meat hacker, 1 oil cloth, 1 pudding mold, 1 granite serving dish, 6 dinner plates, 6 soup plates, 6 salad plates, 1 water pitcher, 1 meat plate, 1 milk pitcher, 2 bowls, 1 pancake platter, 2 glasses, 1 gravy dish, 1 soup tureen, 6 cups and saucers, 6 granite-ware plates, 4 granite-ware cups, 1 liter measure, 6 knives, 6 forks, 6 teaspoons, 6 soup spoons, 4 kitchen knives, 1 water boiler, 1 potato boiler, 4 baking dishes, 2 stew pans, 2 skillets, 2 bakers, 2 large collanders, 1 soup strainer, 1 coffee strainer, 1 coffee pot, 2 iron spoons, 4 wooden spoons, 1 box of metal polish, polishing boards, towels.

The theory and practice in cooking are very closely related. Ordinarily the theoretical part of the work immediately precedes the practical work. The first part of the cooking period is devoted to discussions and instructions, while the rest of the time is taken up with cooking itself. A great deal of time is saved for actual practice by taking advantage of all possible correlations existing between cooking and the other subjects in the course. For example, the food elements, the vegetables, fruit, meat, grains, fish, are all studied in botany and zoölogy. Water, sugar, fire, coal, gas, baking are all treated rather fully in physics and chemistry. These topics barely require more than a short review in the cooking period. At the same time, because these topics are used in the cooking class, a motive is furnished for learning or studying them in the science classes. Such theoretical work as is given is very simple and direct. The children are not required to learn any chemical formulæ or to calculate the number of calories or heat units in this or that particular article of food. There is a good deal of discussion about how to keep food clean, desirable combinations of food, economy in buying, keeping of household accounts, and topics of this kind.

Very definite instructions always precede the practical work.



Reasons for doing the work one way rather than another are always given. The teacher gives the instructions slowly, answers questions now and then, while the girls write in their notebooks. Frequently the teacher gives only the first part of the directions, and after that has been done, or, if possible, while it is being done, gives the rest of the instructions.

The girls work together in groups, as a rule, for very few kitchens have individual equipment. The Germans believe that it is almost as valuable to work in groups as it is to work individually, that it frequently prevents errors in carrying out instructions, and that it saves time. The one fact that is established is that it saves a very great deal of money.

The girls seem to enjoy this kind of work more than any other which they are called upon to do. Outside of the sewing and gymnasium classes it is the only opportunity that they have to express themselves and show any individuality whatever. They are more at their ease and really seem to have a good time. As far as the educative value of the subject is concerned, it is preëminently ahead of almost all other subjects. First, it gives the child a type of knowledge which is immediately useful because most of the girls help in such work at home. Secondly, the problems they are called upon to solve in planning a meal at school, or some other similar project, require a longer thought process, a process with more steps in it, than any other subject, not excluding even arithmetic and physics.

Outside of the actual cooking the girls receive a great deal of instruction and some practice in general housework, which consists mostly of learning how to keep everything around the house clean, particularly the cooking utensils. The girls also learn how to wash, dry, and iron clothes. Several teachers told me that they considered the part of the work which had to do with cleaning more important than the

actual cooking. No girl leaves the *Volksschule* where house-keeping is taught who does not know what water, soap, and scouring brushes can do for dirt, and she has learned it through experience. Cleanliness is one of the German's greatest virtues.

Another feature of the cooking instruction is that the girls are always required to prepare meals rather than individual dishes. They are required to prepare food in quantities large enough for the average family in the average length of time, and to have it all ready at once. In our American schools the girls are taught too often to prepare one thing without any regard to any other element involved in feeding a hungry family punctually and sufficiently.

Another lesson which the teachers strive to teach is that of economy. The girls in their cooking classes take the actual incomes of their own homes and cook accordingly. The incomes of German homes of the lower class are small and the problem confronting the housewife is how to prepare a meal for four for about thirty cents. This is the problem the children in the schools have to solve. To do this the girls are required to plan meals, to do the buying, and all the rest. They take a family of a certain size, they take a normal income, and divide it up among the different things for which money must be spent, such as food, rent, clothing, savings, and the like. Their expenses for food must be within the limits of the apportionment for that item. This is excellent practice for the girls in buying, planning, and in bookkeeping. It is the only way of teaching economy, if it can be done. Economy is another great virtue of German character.

COOKING. CLASS I. GIRLS, AGE 13-14. STEGLITZ. BERLIN

After the girls had put on water to boil the teacher gave them the directions.

*Teacher:* To-day we are going to cook shell-fish, with mustard dressing and boiled potatoes. What are we going to do?

*Pupil:* We are going to cook shell-fish, with mustard dressing and boiled potatoes.

*Teacher:* Where do we get this fish?

*Pupil:* We get shell-fish from the North Sea.

*Teacher:* There are salt-water fish and fresh-water fish. The shell-fish is a salt-water fish. Describe this fish.

*Pupil:* The fish is medium in size; it has black stripes on both sides of the back and it has a large head.

*Teacher:* Do you see anything special, any distinguishing sign?

*Pupil:* Yes, there are black spots on both sides.

*Teacher:* How can you tell a shell-fish?

*Pupil:* A shell-fish always has those black spots on the sides.

*Teacher:* A good fish, one that is not spoiled, must have red, shiny gills. The eyes must be good. It must smell fresh. The flesh must be elastic, so that when I press my finger into the fish the mark will soon disappear. Repeat that.

*Pupil:* A good fish must have red, shiny gills, a good odor, and the flesh must be elastic.

*Teacher:* Repeat that again.

*Pupil:* A good fish must have red, shiny gills, a good odor, and the flesh must be elastic.

*Teacher:* Repeat that again together.

*Pupils:* A good fish must have red, shiny gills, a good odor, and the flesh must be elastic.

*Teacher:* What does sea-fish cost?

*Pupil:* Sea-fish costs from 40 to 50 *Pfennige* a pound.

*Teacher:* Meat costs more than fish. One fourth of a pound of meat is required for each person, while one half a pound of fish is required for each person. One fourth of a pound of meat costs 35 to 40 *Pfennige*, while a half pound of fish costs but 20 to 25 *Pfennige*. Which is the cheaper?

*Pupil:* Fish is the cheaper.

*Teacher:* Both fish and veal are very digestible. There is albumen in fish. It is easily digested and very nutritive. What can we say of fish?

*Pupil:* Fish contains albumen. Fish is very easily digested and is very nutritive.

*Teacher:* What are the advantages of fish as a food?

*Pupil:* Fish is cheap, digestible, and nutritive.

*Teacher:* How are fish brought to Berlin?

*Pupil:* They are brought here in refrigerator cars, which are lined with wood and tin.

*Teacher:* From where do we get fish?

*Pupil:* We get fish from Bremerhaven and Cuxhaven.

*Teacher:* We shall now scale the fish. Where do we begin to scale the fish?

*Pupil:* We should begin at the tail and on the sides with a short, sharp knife.

*Teacher:* Next we remove the gills and cut off the head. (Teacher proceeds with the work, the children do not do their work until later.) There are four very important things to learn in cooking fish. They all begin with the letter "s" (in German). They are clean (*säubern*), salt (*salzen*), sour with vinegar (*säuren*), let stand (*stehen lassen*). What are the four things to learn?

*Pupil:* Clean, salt, sour, and let stand.

*Teacher:* After that is done we cook the fish. If we cook the whole fish we must begin with tepid or warm water, so the outside will not cook too soon and fall apart. If we cut the fish up we may use boiling water at once. How do you know when the fish is done?

*Pupil:* The meat gets white and the bones come out easily.

*Teacher:* Now let's calculate the cost of the meal.

The following table was put on the board:

$\frac{3}{4}$ lb. fish . . . . .	.75 Mark
Salt, pepper, vinegar . . . . .	.01 Mark
50 gr. butter . . . . .	.08 Mark
75 gr. meal . . . . .	.03 Mark
	.87 Mark
Seasoning for sauce poured over fish . . .	.03 Mark
1 kg. potatoes . . . . .	.06 Mark
	.96 Mark — Total

*Teacher:* After the head has been cut off, remove the entrails and wash thoroughly. Then put the fish in a liter of cold water and cook after you have cut it up. Add to it some salt, pepper, and vinegar. When it is done let it stand for a couple of hours. Half an hour before meal-time make the mustard dressing with cold water, fish broth, meal, mustard, and onions and cook for 15 minutes. Finally take some of the fish, cook in boiling water for two or three minutes and then serve with the mustard sauce. You know how to boil potatoes.

The girls carried out the instructions without any failures and served a very nice little meal, to which we were invited. After the meal was over, great care and attention were given to cleaning the dishes and replacing them. We do not vouch for the accuracy of the above recipe, for in taking notes on this lesson we were somewhat lost as to the technical terms used.

## CHAPTER XXIV

### SINGING

Two hours each week are given over to singing in all classes of the *Volksschulen* except in the first two years, where it receives only one hour a week, or two half-hour periods in connection with games and plays in physical training.

The course of study in music in the Berlin schools is given in this chapter and it indicates the number and names of the songs, as well as the amount of musical theory which is required. There is really very little emphasis laid upon the technical side of music. By far the greater part of the time is given to learning songs and singing them.

Each German teacher must be able to sing. There are only a few who cannot play the violin with more or less ability, for this instrument is ordinarily used for the accompani-  
**Teachers** ment. Many of the rural teachers can play the organ, since they are not only the school-teachers but also the church organists. The organ is used in some schools; the piano is rarely found in the *Volksschulen*. In the larger cities many schools have special teachers for music, as is the custom in America. In such cases the regular class teachers have no music whatever to teach. It goes without saying that the better results are obtained under special teachers. Special teachers have to take a definite course in preparation at the normal schools and are required to pass an examination before being certified as music teachers.

Our criticism of the music teaching will not concern itself much with the method, but restrict itself to the rather obvious

educative influence exerted by the subject. There are two obvious effects of the music instruction — to the children it means recreation and enjoyment, and increase in patriotic and religious fervor. Every child must sing whether he has a good voice or not. In the end every child wants to sing and with all the fervor of his soul. At least they want to sing for visitors. The teachers invariably allow the children to choose some of the songs. We personally had heard *Deutschland, Deutschland über alles* eighty-five times in different classes before we stopped counting. Music, which means singing in the *Volksschule*, is a very valuable support to the work in history and religion as they affect the child's patriotic ardor.

The songs are always committed to memory thoroughly before the singing is begun. The religious songs are learned in the religion hour, and frequently some of the secular songs are learned as literature in the German or in the history period. These four subjects are very closely correlated as far as the content of the songs is concerned. In order to secure the proper expression the meaning of each song is clear before it is sung. The class then recites the words of the song in unison. The teacher sings the song first, a stanza at a time, and then the class sings it with him, over and over until it is learned.

I had visited a girls' school in Bredow (Pomerania) for several days and had made friends with a number of the children. They were accustomed to invite visitors to hear classes which they enjoyed especially, and on my last day there, the girls in the upper classes asked me to come to hear them sing. This school had a regular music teacher, who was full of fire and vim. There were in all about eighty girls in the combined classes. The teacher talked for a short time about a new scale they had been studying and when that was through he began with the songs. He said he always allowed the girls to choose all their songs — any that they had learned. The girls were as happy as could be,

and sang to their hearts' content. Not getting enough response, the teacher mounted his table, the violin in one hand and the bow in the other, and I have never seen so much enthusiasm in any class in my life. After they had sung several songs, one little girl put up her hand and asked, "May I sing a song for the gentleman?" On receiving permission, she gave as beautiful a rendition of *Stille Nacht, heilige Nacht* as I ever have heard.

We cite this instance only to illustrate what happened in almost every school. One began to feel the latent enthusiasm and patriotic and religious fervor of the Germans, more strong in the girls even than in the boys.

The important lesson to be learned from the music of the *Volksschulen* is the influence singing may have upon the character and patriotism of the children. We can welcome the day when it will be impossible for a teacher who cannot lead the children in singing to secure a position in our elementary grades.

## SINGING

### CLASS 8: 1 HOUR

First attempts to sing, awakening of the musical and rhythmical feeling.

In connection with the object lessons, folk-songs and game-songs which have been used as language exercises are to be sung, being first spoken by the teacher, then by the pupils; then they are recited in musical rhythm, finally sung or played by the teacher and then sung by the pupils.

Also in a like manner, church songs and their melodies, together with drill in position of the body and the mouth.

### CHURCH SONGS

*Ach, bleib' mit deiner Gnade.*

### FOLK-SONGS

*Kuckuck.*

*Schlaf, mein Kind.*

*Fuchs, du hast die Gans gestohlen.*

*Morgen, Kinder, wird's was geben.*



## CLASS 7: 1 HOUR

Singing from music without key or signature.

Text: Numerical notation and suitable syllables.

1. Pointing out and naming of the lines and spaces by the children.
2. Singing the scale up and down.

The fundamental tone is to be written on the first line below the staff and to be intoned in a moderate, suitable pitch.

3. Quarter notes and quarter rest.  $\frac{1}{4}$  time, beating time, bar, double-bar,  $\frac{1}{4}$  time, half note, and half rest. Whole note and whole rest.  $\frac{3}{4}$  time, rest, and repeat.

4. Singing of small groups of notes, in sequence up and down, which always return to the fundamental tone.

5. Accented syllables. Loud and soft.

6. Repetition of the work of Class 8.

## CHURCH SONGS

*Mir nach, spricht Christus.*

*Vom Himmel hoch.*

## FOLK-SONGS

*Der Mond ist aufgegangen* (st. 1, 2).

*Alle Jahre wieder.*

*Die Abendglocke schallet.*

*Vögel singen* (st. 1, 2, 4) ( $\frac{3}{4}$  time).

## CLASS 6: 2 HOURS

Familiarization with the major key.

Extension of range down to A and up to F.

1. The key of G, C-major scale. Naming and singing of particular sequences by the German name, *c, d, e*, etc. Position of the half steps from 3 to 4 and from 7 to 8.

2. Triad on the first interval with reversions. Major thirds and minor thirds.

3. Eighth notes and eighth rest. Dotted half note.  $\frac{3}{4}$  time.

4. Regulation of breathing. Inhalation. Holding of the breath.

**Exhaling.**

## CHURCH SONGS

*Lobt Gott, ihr Christen.*

*Wach, auf, mein Herz.*

*Jesu, geh' voran.*

## FOLK-SONGS

*O wie es ist kalt geworden* ( $\frac{3}{4}$  time).

*Ihr Kinderlein, kommet* (st. 2, *Da liegt es, ach Kinder*; st. 3, *So nimm*).

*Alles neu macht der Mai* (st. 1).

*Wer hat die schönsten Schäfchen.*

## CLASS 5: 2 HOURS

Extension of the range down to lower A and up to G.

1. Formation of G-major scale. Sharp #.

Removal of the sharp by a natural. The triad and the first and fifth intervals.

2. Sharpening of F to F#. Distinguishing the half tone F#-G from the whole tone F-G, the half tone E-F from the whole tone E-F#, up and down.

3. Dotted quarter notes.  $\frac{3}{8}$  time,  $\frac{5}{8}$  time.

4. Slur.

Beginning of two-part singing.

## CHURCH SONGS

*Nun ruhen alle Wälder.*

*Liebster Jesu, wir sind hier.*

*Lobe den Herren.*

*Gott des Himmels und der Erden.*

*Freu' dich sehr.*

## FOLK-SONGS

*Heil dir im Siegerkranz.*

*Ich hatt' einen Kameraden* (two parts).

*O du fröhliche* (two parts).

*Komm, lieber Mai.*

*Jung Siegfried.*

## CLASS 4: 2 HOURS

Range from lower G to upper G.

1. Formation of F-major scale. Flat ♭.  
Removal of the flat by a natural. Distinguishing A-B♭ from A-B, B-C from B♭-C, up and down.
2. Combination into cadences of the first, fourth, and fifth triads of C, G, and F-major.
3. Sixteenth note and sixteenth rest. Dotted eighth.
4. Practice in crescendo and decrescendo.

## CHURCH SONGS

*Nun danket alle Gott.  
Herr Jesu Christ, dich zu uns wend'.  
Mein erst Gefühl.  
Wie soll ich dich empfangen.  
O Haupt voll Blut und Wunden.*

## FOLK-SONGS

*Deutschland, Deutschland über alles* (unison).  
*Ich habe mich ergeben* (two parts).  
*So nimm denn* (two parts).  
*Nachtigall, Nachtigall* (two parts).  
*Wo frag' ich viel nach Geld und Gut* (two parts).

## CLASS 3: 2 HOURS

1. (a) D-major scale -C. Removal of C♯ by a natural. Distinguishing C♯-D from C-D.  
(b) B-major scale. E flat. Removal of the flat by a natural. Distinguishing the whole and half tones as in 1, a.
2. Chief triads of D-major and B-major with their reversions. Forming of cadences in B-major and D-major.
3. Use of ♯ and ♭ before other fundamental tones (marks of transposition).
4. Practice of fourths and fifths.  
Beginning of three-part singing.

## CHURCH SONGS

*O heiliger Geist.  
 O dass ich tausend Zungen hätte.  
 Dir, dir, Jehova, will ich singen.  
 Wachet auf, ruft uns die Stimme.  
 Jesus, meine Zuversicht.  
 Ein' feste Burg ist unser Gott.*

## FOLK-SONGS

*Ich weiss nicht, was soll es bedeuten* (two parts).  
*Es braust ein Ruf wie Donnerhall* (one part).  
*Das Wandern ist* (two parts).  
*Der Mai ist gekommen* (three parts).  
*Stille Nacht, heilige Nacht* (three parts).  
*Nun ade du mein lieb' Heimatland* (three parts).

## CLASS 2: 2 HOURS

1. A-major and E $\flat$ -major scales. Application of G $\sharp$  or G $\flat$ , as in Class 3. Cadences in A-major and E $\flat$ -major. Formation of triads on every interval of the major scale.
2. Major and minor sixths.
3. Development of the minor scale from the major scale by making the sixth the fundamental.

## CHURCH SONGS

*Aus tiefer Not schrei ich zu dir* (Melody: *Herr wie du*).  
*Eins ist Not.*  
*Allein Gott in der Höh' sei Ehr'.*  
*Wie gross ist des Allmacht'gen Güte.*  
*Was Gott tut, das ist wohlgetan.*  
*Wer nur den lieben Gott lässt walten.*  
 Liturgical song (unison).

## FOLK-SONGS

Folk-songs chosen by the teacher, popular songs, and some classical songs of three or four parts.

## CLASS 1: 2 HOURS

## CHURCH SONGS

*O Lamm Gottes.*

*Sei Lob und Ehr'* (Melody: *Es ist das Heil uns kommen her*).

*Herz und Herz vereint zusammen* (Melody: *O du Liebe meiner Liebe*).

*Sollt' ich meinem Gott nicht singen.*

These songs are for the schools in which Class 1 and Class 2 are not united in singing instruction.

## CHAPTER XXV

### DRAWING

DRAWING was made a regular subject of instruction in the Prussian schools by the General Regulations of 1872, although its great value in the education of the child had been recognized by Pestalozzi many years before. There had been a great deal of drawing taught in all the different types of schools before this time. There always has been a very great divergence of opinion among German teachers of drawing as to the content and method of the subject. Suffice it to say here that drawing in the elementary school until recent years had been mere copying from a pattern or had been geometrical and mechanical to a large degree. The purpose of the subject was chiefly the formal discipline and the practical value that could be derived. Sense of color and perspective were totally lacking. Real drawing ability was neglected. Geometrical exactness was demanded.

The new regulations<sup>1</sup> concerning the course and method in drawing are given because they best explain what the *Volksschule* is now attempting in this field.

I. Free-hand Drawing. General Aim. Drawing is to enable the pupils to observe nature and the objects of their environment in regard to form and color and to reproduce clearly and simply that which has been seen.

Lower Section:

Drawing from Memory.

Middle and Upper Sections:

Drawing from the Object.

<sup>1</sup> *Min. Erl. vom 12. Juni, 1902.*

A. Lower Section. First three years of school. In the first school year special hours for drawing are not set aside. Drawing is given in connection with instruction in German. Work: Simple objects from the sphere of the child's observation are drawn from memory.

Examples: Plum, chain, spectacles, egg, spoon, ovate leaf, hoop, wheel, watch-dial, picture frame, copy-book, envelope, window, door, paper hat, kite, gable, sign-board or door-plate, saw, ax, knife, horseshoe, pliers, shears, leaves of various shapes, etc.

Drawing is done with charcoal, chalk, and colored crayons on wrapping-paper which is fixed by clamps on adjustable drawing-boards, which are made of pasteboard. Some of the pupils draw on the blackboard. There is no individual instruction. The class works as a group.

The purpose of drawing exercises in the lower section is to prepare the way for training the eye and the hand. The finished drawing is to show whether the child has grasped the essentials of the form of the object presented. The sketching of definite models is not yet a part of the instruction. All drawings are to be done free-hand. Artificial or guide lines are not to be used in drawing simple objects. The pupils are urged to execute the lines with one stroke and to let the incorrect lines stand until the correct line is secured by a repetition of the exercise. Patterns of any kind are forbidden.

In the treatment of the subject matter given above the following method is to be followed:

The teacher will have the object drawn by the children from memory in order to ascertain what conception the children have of the object. Together with the children the teacher establishes the chief characteristics of the object. Then the object is drawn on the board by several children. Finally all the children draw the object on paper from memory.

*B. Middle Section. Fourth and fifth years. Work:* The instruction goes over from drawing from memory to drawing from objects. Flat objects, especially those taken from nature, are used as models. Exercises with the same object are taken in finding color and in the free reproduction with the brush without sketch lines. Under favorable circumstances drawing from simple articles of the household may be begun. Drawing from memory is continued, even after work in drawing from real objects is taken up.

Examples for fourth school year—Class 5: Leaves, butterflies, and dragon-flies of simple form, as: Plantain, lily-of-the-valley, sumac, copper-beech, lilac, arrowhead, corn-bind, hazelwort, pig-weed, ground-wig, common oak, elm, liverwort, passion-flower, ivy, hedge butterfly, the red admiral, and dragon-fly.

Examples for fifth school year—Class 4: Difficult leaves, butterflies, libellæ, fish, birds' feathers and wings, as: Ailanthus, chestnut, maple, sarsaparilla, Virginia creeper, grape, hellebore, sycamore, buttercup, corn poppy, geranium, Spanish carnation, peacock butterfly, swallow-tail butterfly, bedstraw moth, death's-head moth, hawk moth, perch, carp, pike, etc.

In addition to the drawing material of the lower section, there are added the soft pencil, white and toned paper, and, as far as possible, brush and water colors. The instruction is individual, group, or class instruction as the need may be.

The goal to be kept in mind for drawing in middle section is that the child learn to make independent observation from nature, to reproduce faithfully in the drawing that which has been observed, and to retain a clear concept in his mind of that which has been drawn. In drawing from nature the chief thing is that the model be correctly conceived and vitally reproduced in its characteristic features.

In the treatment of this subject matter the following method is to be pursued in general.



After the pupils individually or in groups have been provided with models, the characteristics, which are important for pictorial reproduction, are established by a discussion of the object. The teacher points out the method of reproduction by sketching the object on the board in clear, distinct lines. Next the whole model and its chief parts are sketched and when this is done the details are taken up. After the pupils have thoroughly learned the essentials of the natural form to be reproduced, they draw it once more from memory with crayon or charcoal, and then they take up its reproduction with pencil. Here especial attention is to be given that the pupil does not skip hastily over the characteristic features and that on the other hand he does not copy in superficial imitation the unimportant details.

C. Upper Section. Sixth, seventh, and eighth years. Work: Drawing from objects is expanded to include the reproduction of phenomena of perspective and shading. The exercises in connection with harmony of color and drawing from memory are continued. Exercises in sketching with pencil and brush are taken up as opportunity affords. Vases, utensils, tools, instruments, parts of the school building and natural objects will serve as models.

Examples for the sixth year: Chest, box, flower-pot, key, cup, bowl, glass, etc.; plum, apple, pear, onion, pumpkin, grapes, walnut, poppy-head, ground cherry, pine-cone, etc.

Examples for the seventh year: Jug, pot, vase, wine-glass, table, bench, chair, cupboard, half-opened window, stove, etc. Leaves, twigs, fruit, rubber-tree, copper-beech, oak, laurel tree, artichoke, ear of corn, thistle, etc.

Examples for the eighth year: Parts of the schoolroom and schoolhouse, clock, mortar, lamp, chandelier, street-lamp, etc. Natural objects as in Class 7. In addition buds and blooms: anemone, narcissus, tulips; also mussels, snail-shells,

beetles, animal heads, stuffed birds, and quadrupeds. Drawing material is the same as in the middle section. Charcoal is to be used by the beginners; later the pencil. Instruction is given individually, to groups, or to the whole class, as the nature of the work demands.

As in the middle and lower sections, the real task of the instruction in the upper section that should be kept in mind is that the pupils learn to observe independently, to reproduce accurately, and to retain a clear picture of the object drawn. The phenomena, therefore, of perspective, shading and color are not to be made known to the child by means of theoretical explanation and constructions, but by practical exercises in the observation of definite objects. The objects are to be so placed that the pupil can really perceive the phenomena which he is about to observe. The correct conception of perspective, lights, and color is the chief thing and not the clever execution and dependent imitation of unimportant details.

In sketching it is a question of reproducing the model faithfully, but with as simple medium as possible.

The following method is to be used in general.

The pupil is led to observe the model closely and on the basis of his observation to sketch with free-hand the whole object. He compares his drawing with the object, either by placing it beside the object or by holding it as far from himself as possible. The errors which do not appear to him are pointed out and improved under the direction of the teacher, by means of perpendicular and horizontal lines. At the same time the shading is done. Only after the plastic impression is obtained in this manner, can any advance be made to further instruction. Here attention is especially to be given that the final effect is not to be destroyed by overemphasis of details.

Also in painting the pupils are urged to put in the chief tones, to prove their correctness by comparison with the model in the

manner given above, and always to hold the total impression in mind.

II. Mechanical (Geometrical) Drawing. Mechanical drawing is connected with geometry in the sixth school year. In Classes 2 and 1 every fourth drawing period is to be given over to mechanical drawing.

Work: Instruction in mechanical drawing is to develop the power of spatial representation in the pupils and to train them in the preparation of clean, accurate drawings and also in the use of the compass, ruler, and drawing-pen.

Sixth school year — Class 3. Drawing of geometrical figures and constructions. Drawing to scales.

Seventh school year — Class 2. Projection of simple bodies: prisms, cubes, pyramids, and combinations of these forms. Drawing of correspondingly simple objects (box, table, bench) to a given scale.

Eighth school year — Class 1. Continuation of the projection of simple solids: cylinder, sphere, and combinations of these forms. Drawing to a scale.

The use of patterns and blackboards is forbidden. The work in Classes 1 and 2 begins with solids as models. This work is not to be continued too long. Rather such exercises are to be given up as soon as possible and such exercises substituted as are not illustrated by any particular model, but only indicated by a sketch by the teacher. The pupil learns in this way to read projection drawings.

The models are to be drawn in horizontal sections, vertical elevation and, if necessary, lateral perspective. Other plane sections occurring in the model and the top of the object are also to be reproduced. Entire models are to be reproduced in right- and acute-angled parallel projection. The drawings are to be executed with drawing-pen and drawing-ink. The drawings are to be tinted with a light, quiet color.

It has been over ten years since these regulations have been passed and it is only natural that within so short a time the whole teaching of the subject has not been changed. The chief reason for the slow change in method is the lack of a body of teachers trained in the spirit of the regulations of 1902. A vast majority of the teachers in the *Volksschulen* at the present time were educated before the date of the regulations and hence have been unable to change materially. This accounts for the very poor teaching of a rather good course of study. The course of study is a very radical change from all that preceded it. Up to 1902 the need of mechanical and geometrical drawing in the ordinary trades has made itself felt so strongly that almost all of the work in the *Volksschulen* in this subject had taken a mechanical turn. Drawing was considered merely an aid to geometry, and it had not been regarded as a means of expression in relation to German, nature study, geography, history, and the other subjects in the curriculum.

Only a small portion of those who teach drawing are particularly trained for it. As in domestic science and physical training, an examination is held every year for **Special Teachers** special teachers in drawing. Candidates for this examination must have finished the equivalent of six years in the secondary school and be nineteen years of age. The examination lasts five days and covers drawing from life, flowers, plants, still life, blackboard drawing, mechanical drawing, methods, course of study, regulations, fitting of drawing room, drawing materials, history of art.

There have been a great many short courses given since 1902 to prepare the old teachers to work according to the new regulations, but as yet only the younger and special teachers are really doing their work in the spirit of the modern movement.

During the first year, drawing is a part of the German instruction, the objects to be drawn being taken from the im-

mediate environment of the child. In the second and third years one hour a week is especially set apart for drawing, while during the remaining five years of the middle and upper sections two hours a week are assigned to it. This <sup>Hours</sup> holds for city schools. In the country schools with one, two, or three teachers, one hour a week ordinarily suffices for the subject. In Munich and in some industrial cities more time is assigned to drawing than here indicated.

The chief task of the drawing instruction in the lower section of the *Volksschule* is to teach the children to draw objects of common life from memory. Drawing from memory <sup>Lower Section</sup> does not mean that the child is to reproduce an apple merely from memory of having seen it outside the school. It means he shall be able to reach that point of ability. Sometimes the object is shown the children first and discussed in regard to its chief characteristics and then drawn. Sometimes the teacher has the children draw the object first as they are able, then come the comparison with the object itself and the discussion, and finally another drawing. Children are allowed to draw as they feel and understand, both with regard to color and form. Self-expression is the aim. One teacher told me that self-expression was very wasteful of drawing materials and that the class never kept together. Corrections in the lower section limit themselves to oral explanations and brief explanations on the blackboard. Details are avoided as far as possible. It was our observation that German children have a very different color appreciation from that of American children. In the use of crayolas in the lower grades, they invariably used the very loudest, brightest color. Ordinarily children are allowed to use pencils and rough paper, charcoal, chalk, and crayolas in the lower grades. Drawing books with patterns to be copied are not allowed in any section of the school.

Special rooms for drawing are first used by children in the

middle section when drawing from objects is first begun. No country schools and only the most modern city buildings have drawing rooms. The regular classroom serves ordinarily for the purpose. In case the building is equipped with a special room for drawing, the latter is usually found on the top floor in order that it may be well lighted. Each child has his own drawing desk, and a cabinet for his drawings. The cabinets are generally arranged in the form of filing cases and are alphabetically grouped. The rooms are always large and are provided with water connections and artificial lighting.

The work in the middle section is chiefly drawing leaves, butterflies, fish, and the like. These are always drawn from models. In the richer cities the children are often provided with mounted specimens of butterflies, leaves, etc., while in the smaller towns and in the country the teacher, with the aid of the children, has to make his own collection. The teacher usually makes a drawing first to show in general the method as to what parts of the object are to be drawn first, the use of sketch lines, and observation of dimensional relationships. The outline form is gotten first and at last the details. Sense of color is also trained in this section. The mediums are oil-crayons (crayolas) and water-colors and white and yellow drawing-paper. In using colors, the outline of the object is sketched first and then the colors are filled in.

The results in the work in this section were very poor as far as our observation went. The teachers as a rule did too much or nothing at all for their pupils and they had gone from the extreme of mechanical work to the other extreme of utmost self-expression on the part of the child, and the result was that the children floundered. Many objects were unrecognizable to us. The teachers gave more actual aid in correction of errors in this section than in the lower section and the instruction tended to be more individual.

Mechanical or geometrical drawing is begun in the sixth year at the same time that geometry is begun. Mechanical drawing fits itself more into the scheme of things in German <sup>Upper</sup> schools than does free-hand drawing. It is much <sup>Section</sup> more orderly, it is much easier to keep everybody together in the work, and is more definite than free-hand drawing. It is the type of work that has always been done in the German schools. We found some really fine work in geometrical and elementary design. Perspective work was rather poor except in a few cases. Free-hand drawing was in very much the same disorganized condition as in the middle section.

No group of school men recognize the great value of drawing for the mental development and powers of expression of children more than do the Germans. Dr. Kerschensteiner, of Munich, has laid particular emphasis upon the value of the subject. He makes drawing a means of expression, and indeed almost the most important means of expression in all subjects, even in German literature. He emphasizes drawing for its practical value as prevocational training for both boys and girls.

The status of drawing in regard to both method and content is now undergoing radical changes in Germany. The aim of the subject and the practice are more widely divorced than in any other subject. The new move- <sup>Conclusion</sup> ment in drawing in the German elementary schools is due in a large measure to American and English influence. The reason for the great amount of failure in the drawing is very evident. Freedom and self-expression are not permitted the children in any other subject than drawing and the children simply do not know what it means. Their ability to express independent ideas has largely been killed by the routine of instruction. The teachers suffer from the same trouble.

## CHAPTER XXVI

### MANUAL TRAINING

MANUAL training for boys is not a regular subject of instruction in the Prussian *Volksschule*, nor in many of the other German states. The subject is generally elective. In some cities, for example, Munich, manual training is compulsory. The expression "elective" refers to choice on the part of the school and not on the part of the pupils. If a city or a school decides to introduce manual training for boys, all the boys are required to take the work. It may seem strange that the girls have had sewing and cooking for many years, while the handwork for boys has been neglected. The reason for there having been no manual training for boys is that the educational policy in Germany has been to leave all vocational or prevocational training to trade or continuation schools, and accordingly no provision for manual training for boys in the *Volksschule* was considered necessary. Sewing and cooking were incorporated in the curriculum of the *Volksschule*, because only recently has ample provision been made for girls in the way of continuation and vocational schools.

During the last quarter of a century a movement has been growing in Germany to foster the manual training work in the *Volksschulen*. Under the leadership of the *Deutscher Verein für Knabenhandarbeit*, a great deal of progress has been made, especially with regard to training of teachers. At the present time there are training schools for manual training teachers in Leipzig and Hannover, and there are also a large number of normal schools in all German states which offer manual training courses.



The Ministry in Berlin has also taken cognizance of the movement.<sup>1</sup> The following reasons for manual training in the public schools, particularly the *Volksschulen*, appear important:

The transformation of the whole economic fabric in the last century has deprived the youthful generations of conditions favorable to later vocational training. In rural communities the youth still learns that which is most important for his life's calling in that he is associated closely with his elders; likewise in the small and middle-sized cities the child has the opportunity of helping the adults in their work, and at least of observing it directly. Conditions in the large city are entirely different. The production and the consumption of goods are for the most part entirely dissociated. Between the life of the workshop and that of the family the only relationship is the wage. The work of the father and frequently that of the mother is unknown and unintelligible to the child. A regular occupation within the narrow walls of the home is for the most part impossible. It is only exceptionally that there are even sufficient playgrounds provided for the children. Accordingly nothing remains except the street, which, it is true, offers much diversion and excitement, but is not the place for a well-regulated physical activity.

The economic and social conditions require that the school take over as far as possible that which the home no longer does, or is able to do.

Before all else the choice of occupations shows that a well-planned introduction for physical education is lacking for a considerable portion of the children, and that the real joy in work is wanting. The inclination to do hard physical work is decreasing. This holds not only for the large cities but in general. The hand-working trades complain seriously that it is difficult, indeed often impossible, to secure a satisfactorily prepared body of apprentices. Industry also suffers from a lack of skilled workmen. The German Committee for Technical Schools has pointed out recently with emphasis that it is very important for the mechanical industries that a greater number of well-prepared skilled workmen be educated than heretofore. If such were done, the quick readjustment to new technical inventions would become possible and a very important element in the ability of Germany to compete in the world's markets would be secured.

While there is a general lack in recruits for the skilled trades, the rush to unskilled labor is extraordinarily great. In Berlin errand boys and helpers

<sup>1</sup> *Zentralblatt*, 1912, p. 520.

make up a third, and in many cities of the Rhine districts a half, of the male youth employed in commerce and industry. These young men perform work of all kinds. Positions are changed quickly and frequently, according to opportunity and whim. The employer concerns himself about them not at all or only exceptionally. Worst of all, the young man becomes independent of his family far too early. He receives a comparatively high wage; it is not an infrequent thing that a boy in the continuation school earns fifteen to twenty marks (\$3.75 to \$5.00) weekly. On the other hand, the wage does not increase sufficiently with increasing age, and the livelihood remains permanently unsatisfactory. The unlearned youth belong chiefly to the most needy class of society; they contribute the greater part of children to orphans' homes. The education of these masses of youthful unskilled workmen is one of the most difficult problems of the present. The continuation school and child welfare movement have important problems to solve in this field. Even if they do their best, the educational effect, which the choice of a definite life's calling exercises, is lacking.

Therefore it is of the greatest importance that the number of unskilled workers does not become greater than is absolutely necessary under existing social and economic conditions. All means which can serve to bring the youth to take up skilled trades therefore deserve earnest attention. The proper advice with regard to choice of trade in the *Volksschule* and the continuation school, also from the doctor and the employment bureau, is a pressing need and will be able to do much. More than anything else, *manual training will be suited to awaken the desire and love for learning a definite trade.*

In foreign countries one notices in manual training the most important means for the advancement of skilled labor and the education of workers trained for a trade. The example of Anglo-Saxon countries proves this. Just recently the English educational authorities were striving to bring about a closer connection between their many manual training schools and their public schools. . . . For this reason we consider it necessary to devote to the question of manual training an increased attention, and in every possible way to advance the education of the youth in the public schools with regard to joy and ability in work.

Practically all the larger cities in Germany have introduced manual training into some of their schools. Out of 38,684 lower schools in Prussia only 1169 had introduced manual training in 1911. The subject is found more in the cities near the

Rhine than in other parts of the empire. This is true on account of the industrial nature of these cities. All the elementary schools in Düsseldorf and Dortmund have manual training shops. Out of the 33,559 country schools only 407 had manual training in 1911. About one seventh of the city schools in Prussia, and about one country school in every eighty, teach manual training for boys.

Handwork for boys includes varied activities, some of which are exercises in paper, cardboard, and sticks, light wood-work, clay modeling, pasteboard work, wood carving, metal work and modeling. All of these are very seldom in-  
Course  
cluded in one course, and the work in the *Volksschule* is limited usually to one or two mediums. In Munich the work confines itself to work with wood and metal and is taught only in the highest grade. In Worms manual training is obligatory and is begun in the third grade. The work in the third grade begins with modeling in clay and plastiline and continues throughout the fourth grade. Pasteboard work is begun in the fifth grade and continued in the sixth. Wood-work is confined to the seventh and eighth grades. In Dortmund manual training is taught in only three schools, the subject being elective. The course deals with elementary work in metal and wood. As far as we could observe, the work in manual training was very similar in all respects to that given in our schools in America. The shops are never well equipped as with us. The Germans have made a rather close study of manual training in America, and it can be said safely that the actual shop work is more American than Danish, whence the beginning of the movement came.

Good teachers of manual training are scarce in the *Volksschulen*. Of course, there are plenty of good teachers of wood-work and the like in trade schools, but as yet the number available for the *Volksschule* is small. They have exactly  
Teachers  
the same difficulty in Germany as in America when a new sub-

ject seeks to make its way into the schools. The old teachers do not know how to teach it and do not want to learn. Accordingly special teachers are trained, or master workmen are called on, and the subject is made elective, until more favorable conditions obtain. Gradually courses in manual training are being put into the normal schools, and manual training normal schools and special courses are being established.

The course of study for teachers, usually coming from the ranks of the elementary school teachers, is typified by **Courses for Teachers** that given at the Simon School of Gardening and Manual Training in Hannover. The course is half a year in length.<sup>1</sup>

*Rural Wood-work.* — In connection with gardening this course deals with the preparation of such wooden structures as are common in gardening or about the rural household.

*Shop Work.* — Here the student receives such instruction as will aid in teaching wood-work in the schools. He also learns to make equipment that can be used in geometry and the natural and physical sciences.

*Wood-work.* — It begins with work with saw and chisel. Then comes work in joinery. Several more or less difficult pieces are prepared in this course. The more capable can work with the lathe.

*Metal Work.* — Work with iron, copper, etc.

*Pasteboard Work.*

*Chemistry, Physics, Methods, Drawing.*

It is easily recognized that the position of manual work for boys in the *Volksschulen* is not very much respected and is by no means well secured. The shops provided are **Conclusion** usually makeshifts; the work is largely elective; the teachers are not well prepared; not enough money is given to insure good results; the purposes of the subject are not well defined. We can say no more than that a beginning has been made.

<sup>1</sup> *Zentralblatt*, 1912, p. 688.

## CHAPTER XXVII

### PHYSICAL TRAINING

SINCE 1862 physical training has been compulsory in all Prussian schools both in the city and in the country. Communities were required to provide gymnasiums and grounds for physical exercises. Teachers were required to fit themselves to teach the subject in the schools. Children's games were added to the course in gymnastics in 1882<sup>1</sup> and at the present time the play feature is one of the most important in the whole course. The play movement received further encouragement from the Ministry in 1908<sup>2</sup> in regulations concerning games, excursions, and the like, all of which were to be encouraged in the *Volkschule*, in order to further the physical welfare of the nation. In 1910 a third hour for gymnastics, games, and play was added to the curriculum of the *Volksschule* in all Prussian schools.<sup>3</sup> More and more the educational authorities are recognizing the enormous influence of physical activity upon the mental and moral character of the people. The government has recognized that up to the present time a far too large share of the time has been given to routine school work and not enough to the bodies of the children. Strength, endurance, beauty, and health are the purpose of the course now rather than mere muscular development as heretofore. German gymnastics were heavy until changed by the introduction of the more valuable portions of Swedish systems in recent years. In addition to the regular three hours each week for physical training, all children are re-

<sup>1</sup> *Min. Erl.*, Oct. 27, 1882.

<sup>2</sup> *Zentralblatt*, 1908, p. 516.

<sup>3</sup> *Ibid.*, 1910, p. 597.

quired to have ten minutes of breathing and arm exercises on the days when there is no regular work in the gymnasium.

Some of the purposes of physical training are as follows:<sup>1</sup>

1. To further physical development and to increase the health of the youth.
2. To accustom the body to a natural, graceful carriage.
3. To increase strength, endurance, and versatility of the body.
4. To assure the acquirement of certain skill which is useful in later life, *especially with reference to service in the army.*
5. To awaken and further self-confidence and resoluteness of the will by increasing the health, strength, and ability of the body.
6. To aid the school in its educational activity, that the pupils are trained in the performance of physical exercises to strict attention, quick comprehension, accurate execution of a command, and *to willing subordination to the purposes of a greater whole.*

The course in physical training varies a great deal according to local conditions, depending on equipment and teaching force. All courses are based on the "Instructions for physical training instruction in the Prussian *Volksschule*" of 1895, and on "Regulations for physical training for boys in *Volksschulen* without gymnasiums," of 1909. The following course of study is merely a general outline to show the nature of the work in the various sections of the *Volksschule*.

In the lower section the course in physical training includes many simple running, singing, and ball games; also games of imitation, such as *Komm mit, Wolli ihr Wissen, Die Tyroler sind lustig*, and the like.

To prepare the children for formal work, marching games and play are used, — marching in flank and column formation, walking and running, Swedish exercises of the simplest nature in connection with imitation games; later real Swedish exercises like arm swinging, arm bending and stretching, back bending and turning, leg swinging and bending, knee bending.

<sup>1</sup> *Leitfaden für den Turnunterricht in preussischen Schulen*, 1895.

The work in the middle and upper sections is more formal and may be discussed under several heads as follows:

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|--|--|
|  | <b>Middle and<br/>Upper Sec-<br/>tions</b> |
| 1. Formations: Taking of positions, military formations.   |  |
| 2. Swedish exercises: (a) Body exercises, head exercises, leg exercises; (b) position exercises, preliminary swimming exercises, breathing exercises, waist exercises. |  |
| 3. Apparatus work: Jumping, rope-climbing, rack, horse, parallel bars, rings, ladder, suspended bar, and other apparatus.  |  |
| 4. Walking, running, hopping exercises, ordinary walk, toe-walk, rapid-walk, climbing-walk, stretching-walk, endurance run, hopping, limping.                          |  |
| 5. Popular exercises: Wrestling, tug-of-war, weight-throwing, contests in high jump, broad jump, hop-step-jump, relay race, and the like.                              |  |
| 6. Games: Games with apparatus, balls, ropes, games without apparatus.   |  |
| 7. Walking and tramping in the open country. We have already referred to this several times.   |  |

Every German school, whether it be in the city or in the country, gives three hours each week in physical training in the two upper sections, ordinarily on alternate days. In country schools or in city schools which have no gymnasiums or covered courts for the work, physical training is omitted on stormy days and an indoor exercise is substituted. In the lower section of the *Volksschule* only one or two hours a week are devoted to physical training.

The greater part of the teaching is done by teachers who also give instruction in other subjects. Of course, in the country this is always the case, and in the majority of cases in the city the physical training work is done by the regular classroom teacher. There is an increasingly greater number of special teachers in physical training, both among the men and among the women. The larger part of the teachers receive their training for the work in the normal schools, where this subject forms a regular part of the course. There are, how-

ever, in Prussia several special institutions for the education of physical training teachers of both sexes. There are also a number of special courses offered each summer. Those who desire to become regular physical training teachers are required to pass an examination which consists of an oral, written, and practical test. The candidate must have passed at least six years in a higher school or its equivalent. The written examination consists of an essay dealing with physical training and answers to questions having to do with the subject. The oral part covers the history of the subject, methods, course of study, vocabulary, and terminology, apparatus, equipment, physiology, and hygiene of physical training, and principles of education. The practical part requires demonstration of ability to carry out given physical exercises. Swimming may be included. The Royal Institute for Teachers of Physical Training, in Berlin, is the best known institution for the preparation for this examination, although attendance at this school is by no means necessary.

Very few rural schools have regular gymnasiums and only the newer buildings in the large cities are so equipped. In some cities one gymnasium serves four or five schools, thus keeping the gymnasium in use practically all the time by different groups of children. These gymnasiums may be in school buildings or they may belong to the city or to some *Turnverein*, of which there are always a great many. As might be expected, the gymnasiums vary a great deal in equipment and in arrangement as to ventilation and lighting. The equipment is generally sufficient and of good character, there always being an abundance of horses, bars, ropes, ladders, mats, clubs, dumbbells, wands. The floors in many cases leave much to be desired. Sometimes they are very rough and bumpy. More often they are dusty. The lighting is sometimes very poor, and the ventila-



tion is almost without exception bad, even when there is provision made for it.

One example is rather characteristic of the worst type of gymnasiums, which are by no means few in number. I went out one afternoon from School No. 1, in the city of S—— with the teacher and fifty boys to the gymnasium in order to see them at work. The teacher was not a regular gymnasium director and he told me that he did not like the work, nor did any one else that he knew, save regular physical training teachers. The boys were very orderly in everything and gave implicit obedience to every command. Four or five of them had special suits and a dozen or more had tennis shoes; the others wore their school clothes and went in stocking feet while in the gymnasium. The floor was of ship's decking and was extremely dusty. The hall was large and poorly lighted. Artificial lighting was used later in the hour. There were no baths in connection with the gymnasium. The teacher wore his school suit and tennis shoes. He gave his directions from a raised platform.

The work consisted very largely of marching and making different formations. All this work was done with the rigidity of Prussian militarism and was continued about twenty-five minutes. By that time the air was so full of dust that most of the children were coughing and they themselves were wet with perspiration. Then came some apparatus work. The class was divided into four sections and they were to learn to go over the "horse" backwards and sideways. The teacher showed them how once or twice, then they worked by themselves. For protection one boy always stood at the "horse" to catch any who might fall. In all respects, the work was similar to that in some of our gymnasiums.

When the hour was up, the boys sang *Deutschland, Deutschland über alles*, put on their coats and collars, if they had removed them, and went home. *No one thought about a bath.*

Some never did. Bathing is not a part of the physical work in the schools. This description is typical of the poorer class of gymnasiums.

The better class, very few in number relatively, are really very fine. The floors are of linoleum or hard wood, immaculately clean, and excellently ventilated and equipped. In some of the better girls' schools the children were required to wear special clothing, and the work was actually in charge of a special teacher. This type of school gymnasium is the ideal of the German school man, but lack of funds and ministerial indifference are accountable for the poor condition of this subject in the *Volksschulen*. One might say where there are new schools there are good gymnasiums, usually in separate buildings, and where there are old school buildings, there are no, or poor, gymnasiums.

The country schools and the towns of smaller rank generally have outdoor gymnasiums. The equipment is usually restricted to the horizontal and parallel bars, the jumping standards, climbing poles, ropes, trapeze, and sand pits. Every school has some kind of exercise ground which is usually the playground. The only drawback with this arrangement is the loss of time incurred owing to inclement weather. It is in regard to outdoor gymnasiums that the Germans excel our schools. Every school in town or country has some kind of outdoor equipment for physical training. In a sense the country child needs the work more than the town child, and every child in Prussia gets an opportunity for some sort of formal gymnasium work.

Whether or not the school has a gymnasium, whenever the weather permits, the physical training work is carried on outside in the open air. On the days when there is no regular gymnasium work, the children are given five or ten minutes of breathing and setting-up exercises. The purpose of these short exercises is to wake up the child and develop habits of deep

breathing. These exercises are given ordinarily after two or three hours of continuous school work. The usual exercises are arm stretching upwards ten or fifteen times, body bending backwards ten times, rolling and circling with bent arms forward and backwards, toe raising and stretching, running on the toes, standing still, leg stretching. The classroom is used for this purpose except in good weather.

Swimming is a part of the physical training course in a few of the German *Volksschulen*. Opportunity is given for swimming in many cities in the public pools, although the schools are not responsible for the children learning to swim.

Swimming

The course of study sometimes takes up "dry land" swimming, and this instruction is of some benefit to the children. Up to the present the swimming is not a serious part of the course. We have seen good swimming instruction for school children in Berlin, Hannover, Duisburg, Danzig, Barmen, Gelsenkirchen, Bochum, and Erfurt.

We can give only general impressions in regard to the physical training work in the *Volksschulen*. A discussion of the actual exercises and methods would not be of benefit sufficient to merit the space here.

The work is, on the whole, too military in character, due, no doubt, to the military training of many of the teachers and to the military purpose to which the subject looks forward. As far as our observations carried us, the children do not get to play — really play. It is all too formal — there is no free play to speak of at all. Everything is directed and proposed by the teacher. According to the regulation of 1910 the third gymnasium period is given over entirely to play — this indicates in itself what the need of the physical training work is. The teachers themselves are poorly prepared for their work and too often detest doing it. They are seldom properly dressed for it and this is no doubt the cause for the

Conclusion

dislike. The children frequently do not enjoy the exercises because they are not clothed for it and are uncomfortable afterwards because of being forced to sit around in sweaty garments.

At the same time, although the methods may be condemned, the amount of time and importance given to the subject holds a very important lesson for us. We, as a nation, neglect the health and bodies of our children in the public school. No German child is overlooked. Some will say that the children in New York, Chicago, Philadelphia, Kansas City, and Nashville do receive physical training. Thus far it is good. What of the children in the country? And in the small towns and cities? They receive nothing. Some day America will learn that healthy citizens are its greatest assets.

## CHAPTER XXIX

### CONCLUSION

THE reader who turns to this chapter without having read closely the preceding ones is sure to be disappointed. An effort has been made to put forward a plain statement of the facts as they have been observed, and we have not been anxious to interpret them, because we should prefer that our observations serve as a basis of opinion rather than that we should impose our own interpretation upon the reader. The impressions that have been received will be summarized, and an attempt will be made to indicate some of the ways in which American school men might profitably learn from the Germans.

Students of German elementary schools often err in their judgment of this type of school because they do not understand its relation to the whole educational machinery. The *Volkschule* is only one of the many parts which make up the educational system. Each part, whether it be the elementary school system, the higher school system, the universities, the normal schools, technical schools, or continuation schools, performs a very definite function in the educational work which the State requires to be done.

During the nineteenth century the leaders of Germany decided that Germany should assume leadership in the world in every line of endeavor, particularly in commerce and world power. They set this as the very definite goal of their national ambition. The next question was how that aim could be accomplished. It was to be done through education. Accordingly school systems were organized with this aim in view. In a state

such as the Germans proposed building there were to be leaders and followers. The followers were to be trained for a docile, efficient German citizenship; that is, the lower classes were to be made into God-fearing, patriotic, economically independent Germans. This was the task of the *Volksschule*, and it has been wonderfully well accomplished. This type of German is created to do the manual labor of the State.

The leaders were to be trained in the middle and higher schools and in the universities. There were to be different grades of leaders: leaders in the lower walks of life, leaders in the middle walks of life, and leaders of the nation. The higher school and universities were employed to produce these types of leaders. From the time of beginning in the higher school at the age of nine until the universities are finished, barriers are placed in the way of advancement of those who would become leaders. Those who fail at the age of fifteen at the time of the one-year volunteer examination, or who quit school at that age, become leaders of the lower order. Those who fall before the barrier of the leaving examination of the higher schools become leaders of somewhat higher rank. In the universities, the restraint of the higher schools is withdrawn, and the students are given absolute freedom. Those who can survive this test of character and who can pass the state examinations have opened to themselves the way to become the leaders in national affairs; those who cannot survive must accept lower positions.

There are then leaders and followers. The leaders think and do; the followers merely do. The schools are organized for the express purpose of producing just these types. It is precisely because these facts are true that we cannot take over the German system or any of its parts without radical changes. They educate the individual for the state; we make the state for the individual.

The lesson to learn here is this. The German sets definitely

his national aims. Those in authority shape every resource to reach that goal. The schools were molded to meet the needs of state. We, in America, should formulate very definitely the goal in keeping with democratic principles for which we are aiming and shape our educational policies toward that end. Unless we take the situation in hand and prepare our citizenship to meet shocks from without, our country is almost sure to meet with grave disaster.

Any conclusions as to the efficiency of the German schools must be drawn with due regard for the purpose which the schools are intended to subserve. One must judge the achievements of the German elementary schools from the standpoint of the German, for what may be highly inefficient for us may be of the greatest efficiency for him. The school that can turn out a good hard-working, industriously efficient, law-abiding German, content to plod along in his unchanging groove, must be considered excellent in Germany, but would be open to the severest criticism if it were established in America. That of which we disapprove is usually condemnable only from our own standpoint, although it may be highly praiseworthy when judged from the German point of view.

The first great aim of German elementary education is the production of an efficient German citizen. An efficient German citizen is one who is God-fearing, one who is economically independent and who is ready and willing to take his place in that part of the social order to which he belongs. This comes to mean that the *Volksschule* must furnish that *general* education which is necessary to all citizens and which is the basis of subsequent occupational training. This latter training is usually cared for by the *Fachschulen* or special schools; in this case, the continuation and trade schools.

The second aim of German elementary education is an unconscious one, but nevertheless unavoidably present. We

Aim of  
German  
Elementary  
Education

interpret it as the felt need of producing in large numbers a type of citizenship easily amenable to the dictates of bureaucratic officialdom. This under class is composed of the peasants, small tradesmen, subordinate officials, artisans, and other laboring classes, together comprising fully ninety per cent of the total population.

Chief among the avowed aims of the *Volksschule* is the formation of moral and religious character. There is no doubt that the reason religion is made one of the chief subjects of instruction in the elementary schools is to teach the lesson of obedience to authority which is the basis of the German state.

The reader should interpret the preceding chapters in the light of the aims of the elementary school which we have just stated. In no other way can a variety of practices current in the German *Volksschule* be justified.

The educational system of Germany has developed from the higher forms of education downward. Also, as a corollary, schools for the upper classes of society developed long before general institutions of learning were established for the common people. The *Volksschule* has been evolved for the most part since the middle of the eighteenth century, in a period contemporaneous with the universal democratic movement in all human institutions. However, the *Volksschule* is not, in Germany, the product of a desire felt by the masses for general culture and training or for the foundations of occupational education. The elementary schools have been given to the people by rulers who saw that the strength of Government lay in an educated body of subjects. Perhaps it would be clearer to say that the elementary school system of Germany was created by the Government for the people. The people themselves did not demand it. Nevertheless, the school system is now a thing which the Government can no longer take away from the governed. A partial

Lesson of  
the Devel-  
opment of  
the German  
*Volksschule*



explanation of the lack of sympathy between the home and the school lies in the fact that the school is not of and from the people. This, naturally, is not the only cause for this lack of sympathy. It is, however, the historical factor in bringing about the situation of which we speak. Because over-centralization of administrative, and the paternalistic attitude of the government in educational matters have largely produced a vast chasm between the home and school in Germany, our American states should be on guard against these errors. The school can only be a living social factor in so far as it is of and from the people and the product of their own activity.

The next lesson which we Americans can draw from the history of the *Volksschule* is that the excellency of the schools stands in direct ratio to the efficiency and preparedness of the teaching body. Capable teachers must be adequately paid and adequately educated. There is a very high coefficient of correlation between the efficiency of schools and the amount of money spent upon them. Germany's schools have improved as the total amount expended upon them has increased.

Reference to the chapter dealing with the statistics of the German schools shows us that the average amount spent for the education of each child is about sixteen dollars. The amount is less than is expended in some American states, but it is a great deal more than in a majority of our states, especially those in the South. Even if the amount expended per child in Germany does not equal that spent in our richest states, it is large enough to insure a very high minimum of excellency, below which none of the schools fall, either in the city or in the country. The point is this; all of the German schools are grouped closely together on the scales of efficiency and of amount of expenditure. This insures protection against unevenness and holes in the general education of the people. A curve representing the degrees of efficiency of German schools in different communities

would approach closely a straight line, while a curve for American elementary schools would be a very broken one.

Teaching in Germany is a profession. The members of the teaching body form a clear-cut, well-defined professional group just as do lawyers and doctors. That teaching is a profession in Germany means that a certain fixed standard of preparation has been required of those persons getting ready for that field of work. It also means that its members remain teachers for life. Teaching in America is not yet a profession in the true sense of the word, because there is no commonly accepted minimum of preparation for the calling, and because the teaching body changes so very rapidly. The most of our teachers make teaching a stepping-stone to some other pursuit. The questions before us now are, how shall we make the average teaching life of our teachers longer, and how shall we raise the standards for the certification in our elementary schools?

The best way to increase the length of service of our teachers is to provide a money compensation which is in some way adequate for the work done. The reason that the most of our teachers, especially the men, quit the field is because there is no money in it, frequently not enough to insure a decent living. This point is by no means a new one, but the study of the German elementary scales impresses the truth and value of this fact upon our minds. The German elementary school teacher does not receive a princely salary, in fact, less, much less, than elementary teachers in many of our larger cities, but such as it is, it is adequate and secure. His salary provides for him a comfortable home, education for his children, some savings, and a pension. It is not very difficult to account for the fact that teachers thus provided for do not leave the profession. If teaching is ever recognized as a full-fledged profession in America, it will be only when we pay our teachers adequate

salaries. As salaries are increased, so increase the requirements necessary for appointment and the length of time which teachers remain in the work, because all three of these elements are closely interwoven with each other and increase and decrease together.

The German elementary teacher is better paid than the American teacher of the same rank. If American and German elementary school teachers' salaries were plotted on a scale, it would be found that the middle fifty per cent of the German teachers would receive far higher salaries than the middle fifty per cent of American teachers. For example, the percentage of German teachers in the *Volksschule* receiving seven hundred dollars yearly would be far greater than the percentage of American teachers receiving the same amount.

A distinct advantage of the German salary system over the American is that the difference in salaries paid in the city and in the country is by no means as great there as it is here at home. In fact, the only difference between the salaries in Germany in cities and in country districts is that in urban communities local increments are paid in order to equalize the cost of living. America must learn that the work of the country teacher is just as important as that of the city teacher and should be equally well compensated.

The German salary system has still another phase, which may be advantageous to us if adopted to some small degree in America. The Germans do not pay an administrative officer in their schools a very much greater salary than they pay the regular teacher. We Americans very often pay a superintendent fifteen hundred dollars and the teachers who have been an equal length of time in the service only half or less than half as much. We should try at least to strike a proper relationship between the salary of the administrators and that of the ordinary teacher.

In close connection with the German salary scale is the teacher's pension, which is granted in all German states. Pensions in Germany are for the most part paid by the State. Pension systems which are supported by the State are based on a number of errors. First, if the teachers are not compelled to contribute to the fund, the incentive for economy and saving is taken from them. This, however, is not always the case. Secondly, we can see no reason why teachers should be pensioned at all, if their salaries are adequate during the years of active service. Fundamentally there is no more reason for pensioning a school teacher than there is for pensioning a groceryman or a butcher. Each in his way performs a service for the state or society and each fills a necessary place in a social order. Every citizen should be economically independent from the time he enters upon his life work until his death. The time for the teacher to receive compensation for his service is while he is performing that service, and not two steps before the grave. In America there is a social stigma attached to the person who draws a pension or lives from money that he has not earned. If we are to have pensions at all, let us have contributory systems. It may at least develop a spirit of thrift in our teachers which up to this time has been sadly lacking.

The total preparation of the elementary teacher in Germany requires fourteen years. As nearly as we can judge this course, it is the equivalent of the American high school course and two years in college plus the professional courses — pedagogy, psychology, and history of education. This is the minimum that is required of every regular teacher. Any one acquainted with the amount of preparation which a very great number of our elementary teachers have can see immediately why the German schools on the average are superior to ours. It is not necessary that we have a uniform standard of preparation

throughout the country, but it is decidedly necessary that a lower limit of preparation be agreed upon, with less than which no teacher can be certificated.

Another very excellent feature of the teacher-training system is that the preparation or training requirements of the country teacher are just as high as those of the city teacher. In fact, a vast majority of all teachers have taught in rural communities. The result of this quality of training is that the work in the country schools is almost as efficiently done as in the cities. The child does not suffer in his general training from accident in place of birth. It follows, of course, that the salaries in rural communities are practically the same as in the cities. The thought presented in this paragraph is of vital importance to us in America. A child on the farm is just as valuable as the one in the city and has every right to equal privileges. The most striking thing about the elementary school system in Germany is that all schools, whether in the city or in the country, possess the essentials of an efficient school plant — trained teachers, good salaries, hygienic and sanitary conditions, well-equipped buildings, teaching material, and all other things which are absolutely necessary for the proper functioning of the school. We in America know what is necessary for good schools, but we do not furnish all our children with the same degree of opportunity for development. Our country schools are by no means on the same plane of excellency as our better city schools. Our rural schools are in want of good teachers, good buildings, money, and, more than all else, sanitary conditions under which the children may work to the best advantage. Until we bring up our country schools to a decent standard, until we give the child in rural communities equal, or at least fair opportunities, we shall continue to strike at the foundation of our national resources and to waste our vital forces.

We believe that the chief points in which the German teacher

has the advantage over the American are: education or preparation; permanency in the profession; and in regard to salary. In other points the American does not suffer in comparison. The three factors which we have just mentioned, as we said before, are all really one and the same. One factor cannot be changed without affecting the other two.

It seems that the best way to attack the problem of the American public school is to take a lesson from Germany in regard to centralization and uniformity in the matter of teacher training and teachers' salaries. The preparation and certification of teachers ought to be a matter of central state authority, because then we would have a more general uniformity along the minimal line. Likewise, the appointment in the last instance should rest with this central authority and should be permanent. Appointment of teachers must be taken out of the range of local politics, jealousies, personal influence of family and the other things which have made the selection of our elementary teachers a matter of accident rather than of real qualification.

To any one who visits American elementary schools the most apparent needs are that the teachers have not a great enough store of facts to present and that their methods are poorly grounded. In the first place, the German elementary teacher on the average knows more things to teach and better how to teach them than does the American teacher. This is due to training alone. It frequently occurs in our schools that a teacher knows enough subject matter but has no good way of imparting it to the children. In all our observation in German schools, we have rarely seen a teacher who did not have a fairly good method, if the aim of German education were kept firmly in mind. The situation as we have it in America is due largely to the fact that a vast number of our teachers have had no training for teaching at all or, if any, only for a very brief period. The following case is typical of what some of our larger cities

permit. In a large Southern city where there is a widely known college for teachers, there are about fifty girls who finished high school one year ago. They have attended the college for a year, taking drawing, sewing, cooking, and English. Next year they intend to teach in the primary grades of the above-mentioned city. They will have had no pedagogy, no psychology, nor anything except subject matter, to prepare them to become primary teachers. It is not necessary to take up pages in pointing out Germany's lesson to us in this matter.

The impression which a careful observer receives of the German school teacher is that each one of them has a vision, each one sees what Germany's ideals are, what Germany's hopes are, and what are the purposes of the public schools. So many of our teachers do not. The profession is a stepping stone to some other profession, business and law for men, marriage for women. Each German teacher believes most fervently that the destiny of his country rests in his hands, since he must train the youth in patriotic, efficient German citizenship. The lesson which the German elementary teacher furnishes us is the hardest one to instill in our teachers' minds and characters; it is the lesson of patriotism, toil, undying ardor, and zeal for the work in hand. We take the liberty to quote from a letter written since the recent war began. It is almost identically the substance of a conversation which we had with the writer in April, 1914, in which he prophesied the war and told us in what light he considered his duty and privilege as a teacher. An extract from the letter follows:

Here we are working, and we shall do our duty as long as we remain here. If the Fatherland calls, then with God for Kaiser and the Empire; for the pen and the sword; instead of teaching history, we shall help make history. The fourteen hundred boys and girls of my school work just as well and diligently as when you were here. Only now and then the children have a holiday when our courageous troops announce new victories in

the East and in the West. Then you should see the eyes and cheeks of our boys and girls burn. Then, my dear A——, one can see how wonderful the work of a teacher really is. Our people, who are fighting for their most sacred possessions, will conquer, and will sooner die than live in slavery, for without honor and without freedom no true man can wish to live.

A study of school administration in Prussia holds a very vital lesson in the matter of state and county organization and supervision of public instruction, especially with reference to rural schools. Our schools should be removed entirely from the realm of politics. All positions in our schools, supervisory or otherwise, should be appointive or on a civil service basis rather than elective. The vast majority of our state superintendents hold their positions for political reasons much more than for professional fitness and ability. Merit should be the sole basis of appointment to such an important educational office, and the term of tenure should depend entirely on the continuance of efficient and satisfactory service, the degree of efficiency rendered to be determined by a board of educational experts.

It is, however, with the smaller unit of school organization that we must concern ourselves. For many years the district system has prevailed in America as far as our rural schools have been concerned, although we have had county supervision in most of our states. Our county superintendents have generally been untrained as far as special preparation for administering and supervising of schools was concerned. As a rule county superintendents have been teachers who by means of political influence or local popularity have had themselves elected to this office without ever having shown any particular fitness or preparation for the work. Consequently our rural schools have never had the same quality of administration or supervision that our city schools have had. There is no doubt at all that we must give our rural schools as efficient and thorough supervision as we give our city schools, if we believe that the rural



population is as important a factor of our social life as the urban populations.

In Germany, theoretically and to a large extent practically, the rural schools are under the same sort of supervision as the city schools. The district school inspectors (*Kreisschulinspektoren*) have control not only of the rural schools but also of the city schools, no matter what the size of the city may be. Such inspectors may be called from any section of the country and the choice need not necessarily be limited to teachers who have served for a long time in the community in question. In this way the most efficient applicant may be chosen for the position. How different is it here in America! The rural schools in Germany, in an ever-increasing percentage, have trained district inspectors, who correspond rather closely to our county superintendents. In every case the occupants of this office are highly educated and have had wide experience in the education of the people. Our usual county superintendent compares in no way with the German inspector.

The unit of school administration in Germany is preëminently more satisfactory than our traditional district system in this country. The administrative county (*Regierungsbezirk*) is the unit of school administration as far as the *Volksschulen* are concerned. These counties are very similar to counties in America with reference to size and to some administrative powers. The inspectors who represent the county and who actually carry on the immediate inspection of the schools are the *Kreisschulinspektoren*. They are the immediate representatives of the central government at Berlin and are the superiors of all other school authorities in their districts. They are appointed by the crown and hence removed from petty local interference; and they are highly trained for their work. The advantage of having a large unit for administration is that financial resources of the district can be better utilized for the

benefit of all, which means a high standard of efficiency in every way. It also means that the educational policy of the schools is not left to a great number of local and less competent school board members. About the only thing the local board does in a German community is to make proposals and to pay the bills. Educational experts decide how it ought to be done.

Even in some of our counties which have a central board, what is the condition? There is frequently a county superintendent who inspects schools and certificates teachers. As likely as not the other members of the board are a number of cheap politicians who have interest in schools because of the patronage they control. They know nothing of education as a profession or of educational aim, and they are in many cases scarcely more than literate. Contrast this with the German county board. The business end of the schools is handled by highly trained government officials, who hold their positions on civil service examination. The educational side of the schools is under the control of educators who have no interest in politics whatever. The lesson for us is plain. The worst form of tyranny is ignorance and inefficiency.

The financing of schools in Germany holds a very important lesson for those interested in the question of school finance. It costs about sixteen dollars a year to educate each child in the *Volksschulen* of Germany. Why does it cost so much more in this country to give a child the same kind of training? The difference in the price of building materials and supplies is part of the answer, but not all. Politics do not enter into the financing of German schools. Bids are let to the lowest bidder, and the buildings are never let out to one firm. Each item is subject to a bid. It makes no difference to the educational authorities who receives the contracts. There are no embezzlements; there are no rake-offs. Further than this, expensive educational experiments are never tried on a large scale until they have been

thoroughly tested. There is no retracing of ground, no payment for failures. And last but not least no money is handled by school teachers or men who have been school teachers, for that is considered to be the work of men trained for business. It furnishes food for thought when we realize that it costs about one hundred sixty millions of dollars a year to educate all the children in Germany who attend the lower schools. These children number over eleven millions. New York City alone pays over thirty million each year for her children.

Germany excels us also in the matter of school statistics. Any one who can read German can find out in ten minutes more about salaries actually paid to teachers than an American student can discover about the same subject here in America in ten years or in fifty. One can tell in one minute just how many teachers there are in Prussia between the ages of thirty and forty and the distribution of their salaries in groups varying twenty-five dollars from each other. One can find out age, salary, and length of service, and any other item which our teachers' colleges investigate in the time it takes to read the figures. These items can never be known in this country under our present system. It is undemocratic to know such things. We can safely say we know but little about the educational statistics of this country as a whole, and it is our most pressing administrative need. Who can tell how many children were retarded in grade in the United States last year? Nobody can, and still the retarded child costs an enormous amount each year. It is undemocratic to be efficient.

Another vital matter of administration is compulsory school attendance. The German compulsory education law, reënforced by imperial child-labor laws, is compulsory in every sense of the word. The children go to school all the time there is school in session, and sickness is the only excuse. All children attend. The police attend to that, but it is only seldom that the police

are called upon, for the people of Germany respect the law. It is undemocratic to respect and obey laws. The larger percentage of our compulsory education laws are farces. Even if they were enforced, it would improve the educational situation but little. What does the enforcement of a law mean which compels a child between the ages of eight and twelve to attend school unless it can already read or write? Under our system of registration of our inhabitants, we do not know how many children there are in a community, especially in cities, how old these children are, or how long they have attended school. *It is undemocratic to have such records.* It is perfectly possible to live in a large American city and have several children who never attend school at all. If they do attend, they may go as often as they want and the only thing necessary to excuse them is a note written by the children themselves or the parents. All the compulsory education laws in the world will do no good until we know how many children there are, their ages, and where they live. We can never educate our people until we get them all in school.

There is another lesson for us in Germany's care, on a national scale, for her exceptional children, particularly the weaker ones. Compulsory education extends to the weaker-minded, the blind, the deaf, the crippled, as well as to any others. The purpose is to save even the broken branches for the state. They too are a part of the national resources and the educational authorities strive, not only for humanitarian reasons but also for economical reasons, to make the weak stronger and as little a burden as possible upon the state. We in America are making efforts in this direction, but they are spasmodic. There is no centralized movement. The movement if undertaken by the state, particularly in reference to retarded children, would reach all and would mean a great saving to the state in the end, and lift a heavy burden from the regular schools. The Mannheim system

and the regular auxiliary schools of all cities in Germany are worthy of study to this end.

The methods, the *How*, of the German schools, are perhaps the source of the greatest value to us. How they teach is much more important than what they teach, although the latter subject is of great importance. We refer at first to no particular device or set of devices or modes of procedure in any subject. To be brief, we mean that inasmuch as Germany by her methods as employed in the *Volksschulen* can make seventy million think and act as one man is the most significant educational fact, and at the same time a theory which Germany can teach us to-day. This is the main thesis of our argument. We believe the stenographic lessons and the discussion of the methods of teaching prove that it is the teaching methods employed in the *Volksschulen* which have wrought this miracle within a hundred years. The important lesson of the German schools is that a nation can be unified in thought and action by means of education, more particularly by instruction.

About one hundred years ago and again forty-five years ago, the leaders of the German nation determined to place Germany in the place of leadership among the nations of the world. To accomplish this end a highly developed citizenship, both leaders and followers, was necessary. The universities and the higher schools have trained the leaders; the *Volksschulen* have trained the followers. The great masses have been molded and cast in one die, — they think alike, — they act alike. What they think and what they do is determined by the leaders of the nation. This is achieved by the *Volksschulen*.

At this point the selection of subject matter in the various subjects in the elementary school plays an important rôle. In two subjects, history and religion, is found the key to the whole situation. The courses of study in these subjects are so selected that a certain attitude of mind and a certain mind content are

afforded the lower classes, which when finally fixed in the consciousness of the people means devotion to the Emperor, and self-abnegation and subordination to the State. Those portions of the Bible are chosen which have most to do with obedience to the Heavenly Father and his representatives on earth, which are in this case, the princes of Hohenzollern. The course in history, and indeed in every other subject, is chosen very largely from a patriotic, national, German point of view. So much for the *What* of the schools.

By an inordinate amount of *memorization* of the selected facts, by constant *drill* on the achievements and power of the German nation, by "line upon line, and precept upon precept" for eight years, and then by service in the army, the youthful mind is Germanized, is set like adamant and is capable of no change. The work of the *Volksschule* is accomplished, for the masses think alike and respond as a man to the slightest suggestion from authority.

It is with no empty bribe that the common people of Germany are thus led into spiritual captivity. Each citizen is educated for an occupation, his home is secure from attack, his children are in good schools, he is protected from disease and famine, he is insured against accident and unemployment; old age has no terrors. Why should a man not sacrifice himself for the State for such privileges? To a man who has never lived in a state of free opportunity of self-betterment, to a man who cannot miss what he has never known, life cannot hold much more than that which the paternalistic government in Germany affords.

Methods of instruction in the various subjects, particularly in history, religion, science, and arithmetic, hold many valuable lessons for teachers in the American elementary schools. The important question is, however, can we increase our national efficiency by content of curricula and methods of instruction

in the lower schools? Of course, it cannot be done in the same way as it is done in Germany, because this is a republic and our conception of the individual and his rights is not the same as in Germany.

To achieve the fullness of our national possibilities we, as Germany has already done, must set definitely the goal of national aims. We must know the end of our efforts. Then we must mold our means and methods to obtain that which we have fully resolved upon. Germany has shown us what can be done in a comparatively short time with a definite aim and definite methods. The methods which Germany has used would not be applicable here, for they lead in exactly the opposite direction from that in which we are endeavoring to go.

And the necessity of action is upon us, necessity from without, and necessity from within. The education of patriotic, self-sacrificing, capable citizens is the only thing which can solve the problems which are near at hand. Indefiniteness and lack of purpose mean loss of leadership in every field of endeavor. The golden dream of being the favored of God will end in a horrible nightmare unless the youth of America is taught how to know the meaning of true liberty, of the exercise of the rights of citizenship, of the value of industry, of courage, and of character.





## APPENDIX

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